LBT-N500/N550/N550K/N550P

SERVICE MANUAL

AEP Model
LBT-N500/N550
UK Model
Australian Model
Mexican Model
Argentine Model
PX Model
LBT-N550
E Model
LBT-N550K/N550P

- LBT-N500/N550/N550K/N550P are composed at following models.
  As for the service manual, it is issued for each component model, then please refert to it.

COMPONENT MODEL NAME FOR THESE SYSTEM

	LBT-N500					LBT-N550							LBT-N550K				LBT-N550P
	AEP	G	IT	EE	CIS	AEP	UK	G	AUS	AR	MX	PX	EA	MY	SP	E	E
Tuner, Preamplifier				STR-N500					STR-N500								
Power Amplifier	TAN-N500																
Casstte Deck	TC-N500																
Compact Disc PLayer	CDP-N500					CDP-N550C											
Speaker System									SS-LB500								
Turntable	*PS-LX56P					PS-LX56P											PS-LX56P

Note: Abbreviation

AR	: Argentine Model	IT	: Italian Model
AUS	: Australian Model	MX	: Mexican Model
EA	: Saudi Arabia Model	MY	: Malaysia Model
EE	: East European Model	SP	: Singapore Model
G	: German Model		

*: LBT-N500
There are two type of LBT-N500 system.
One is consisting PS-LX56P and the other one dose not consist PS-LX56P.

COMPACT Hi-Fi STEREO SYSTEM

SONY®

PARTS LIST

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation

AR : Argentine Model
AUS : Australian Model
EA : Saudi Arabia Model
EE : East European Model
G : German Model
IT : Italian Model
MX : Mexican Model
MY : Malaysia Model
SP : Singapore Model

Part No.	Description
1-467-997-11	COMMANDER, STANDARD (RM-S500L)
1-501-374-11	ANTENNA, LOOP
1-501-594-31	ANTENNA (FM) (AEP, UK, IT, EE, CIS)
1-501-659-41	ANTENNA (FM) (E, EA, SP, MY, MX, AR, AUS, PX)
1-769-392-11	CORD (WITH CONNECTOR)
1-769-393-11	CORD (WITH CONNECTOR)
3-798-377-41	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (N500:AEP)
3-798-377-51	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (N500:AEP, IT)
3-798-377-71	MANUAL, INSTRUCTION (GERMAN) (N500:G)
3-798-377-81	MANUAL, INSTRUCTION (ENGLISH, GERMAN, POLISH, RUSSIAN) (N500:EE, CIS)
3-798-423-11	MANUAL, INSTRUCTION (ENGLISH) (N550:UK)
3-798-423-41	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (N550:AEP)
3-798-423-51	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (N550:AEP, G)
3-798-423-81	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, CHINESE) (E, EA, MY, SP, MX, AR, AUS, PX)
4-937-945-11	PLATE (TRANSPORT), LOCK (CDP-N550C)
4-941-762-01	COVER (MLY), BATTERY (for RM-S500L)
* 4-947-532-01	SNOW BOX (L) (PS-LX56P)
* 4-947-533-01	SNOW BOX (R) (PS-LX56P)
4-955-313-01	ADAPTOR, 45 (PS-LX56P)
* 4-973-083-01	INDIVIDUAL CARTON (N500:AEP) (WITH TURNTABLE)
* 4-973-084-01	INDIVIDUAL CARTON (N500:AEP, G, IT) (WITHOUT TURNTABLE)

Part No.	Description
* 4-973-086-01	INDIVIDUAL CARTON (N500:EE, CIS)
* 4-973-307-01	CUSHION (UPPER) (CDP-N500/STR-N500:UK, EE, CIS, E, MX, AR, AUS, PX/STR-N500K)
* 4-973-639-01	INDIVIDUAL CARTON (STR-N500:UK, CIS, E, PX/STR-N500K)
* 4-973-650-01	CUSHION (LOWER) (CDP-N500/STR-N500:UK, EE, CIS, E, MX, AR, AUS, PX/STR-N500K)
* 4-973-867-01	INDIVIDUAL CARTON (STR-N500:AEP, G, IT)
* 4-973-868-01	CUSHION (STR-N500:AEP, G, IT)
* 4-973-916-01	CUSHION (FRONT) (CDP-N550C)
* 4-973-917-01	CUSHION (REAR) (CDP-N550C)
* 4-974-070-01	INDIVIDUAL CARTON (SS-LB500:AUS)
* 4-974-071-01	CUSHION (SS-LB500)
* 4-974-187-01	INDIVIDUAL CARTON (N550:AEP, UK) (WITH TURNTABLE)
* 4-974-188-01	INDIVIDUAL CARTON (N550:AEP, G) (WITHOUT TURNTABLE)
* 4-974-189-01	INDIVIDUAL CARTON (N550P)
* 4-974-191-01	INDIVIDUAL CARTON (N550:AUS, PX)
* 4-974-192-01	INDIVIDUAL CARTON (N550:AR)
* 4-974-193-01	INDIVIDUAL CARTON (N550:MX)
* 4-974-194-01	INDIVIDUAL CARTON (N550K:EA)
* 4-974-195-01	INDIVIDUAL CARTON (N550K:E, MY, SP)
* 4-975-728-01	INDIVIDUAL CARTON (SS-LB500:E)
* 4-975-729-01	INDIVIDUAL CARTON (SS-LB500:MX)
A-4674-087-A	TURNTABLE ASSY (PS-LX56P)

English
95C0586-1
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Consumer A&V Products Company
Home A&V Products Div.

Published by Home A&V Products Div.
Quality Engineering Dept.

STR-N500/N600

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
STR-N500/N600
PX Model
STR-N500

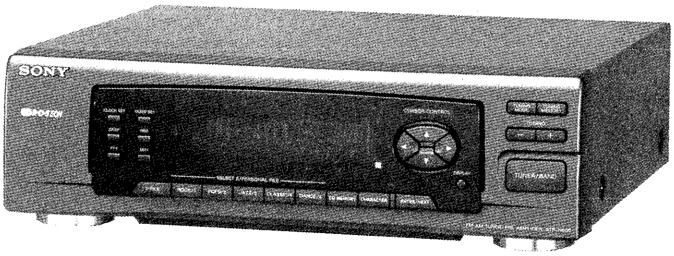


Photo: STR-N600

STR-N500/N600 are tuner and amplifier section in LBT-N500, LBT-N550, LBT-N550P, LBT-N600AV and LBT-N650AV.

SPECIFICATIONS

System	FM stereo FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 - 108.0 MHz
Aerial	75 ohms unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range		
Latin American models:		
	AM:	530 - 1,710 kHz
German and Italian models:		
	AM:	531 - 1,602 kHz
Other European models:		
	MW:	531 - 1,602 kHz
	LW:	153 - 279 kHz
Other models:		
	AM:	531 - 1,602 kHz

Aerial	AM loop aerial External aerial terminals
Intermediate frequency	450 kHz

Input	Jack type
AUX	Phono
PHONO (MM)	Phono

input	Sensitivity	Impedance
AUX	245 mV	47 kilohms
PHONO (MM)	3.3 mV	47 kilohms

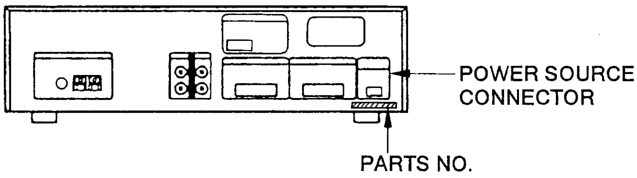
Weight	Approx. 2.6 kg
Dimensions	Approx. 355 x 105 x 315 mm (w/h/d, including projections)

FM-AM TUNER/PRE-AMPLIFIER

SONY®

MODEL IDENTIFICATION

– BACK PANEL –



	PARTS NO.	NOTE
N500: UK Model	4-969-784-0□	With power source connector for PS-LX56P
N500: AEP, German, Italian Model	4-969-784-1□	
N500: East European, CIS Model	4-969-784-2□	
N500: E Model	4-970-163-0□	With power source connector for PS-LX56P
N500: Mexican, Australian, PX Model	4-970-163-1□	
N500: Argentine Model	4-970-163-4□	
N500: AEP 2 Model	4-973-530-0□	AEP model with power source connector for PS-LX56P
N600: AEP, UK, German, Italian Model	4-969-784-4□	
N600: East European, CIS Model	4-969-784-5□	
N600: E Model	4-970-163-5□	
N600: Australian Model	4-970-163-6□	

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

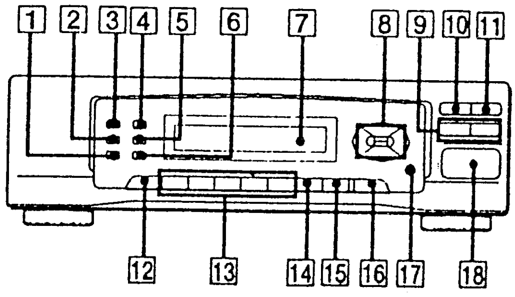
SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. INDEX TO PARTS AND CONTROLS

Front Panel

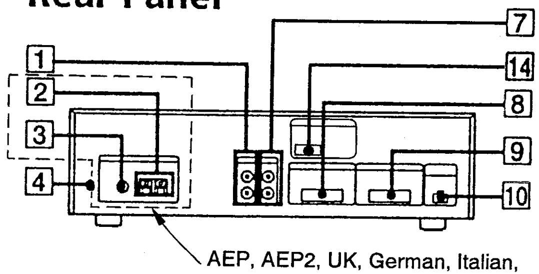
Tuner / Preamplifier (STR-N500/N600)



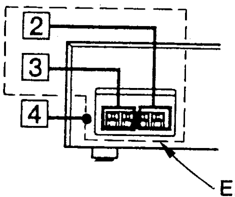
- 1 PTY button (*)
- 2 DAILY button
- 3 CLOCK SET button
- 4 TIMER SET button
- 5 REC button
- 6 EON button (*)
- 7 Display window
- 8 CURSOR CONTROL keys
- 9 TUNING (+/–) buttons
- 10 TUNING MODE button
- 11 TUNING MEMORY button
- 12 P.FILE button
- 13 SELECT 5/PERSONAL FILE buttons
- 14 EQ MEMORY button
- 15 CHARACTER button
- 16 ENTER/NEXT button
- 17 DISPLAY button
- 18 TUNER/BAND button

*: AEP, UK, German, Italian, East European ONLY.

Rear Panel



AEP, AEP2, UK, German, Italian, East European, CIS model



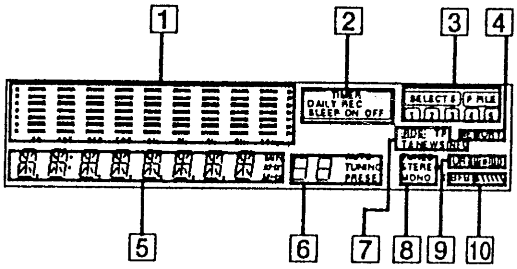
E, Australian, Argentine, Mexican, PX model

- 1 PHONO IN jacks
- 2 AM terminal
- 3 FM 75Ω terminal
- 4 ⏚ ground terminal
- 7 AUX IN jacks
- 8 SYSTEM CONTROL 1 terminals
- 9 SYSTEM CONTROL 2 terminals
- 10 POWER SOURCE terminal (only for the model supplied with a turntable) (N500: AEP2, UK, E ONLY)
- 14 SYSTEM CONTROL 3 terminals (N600 ONLY)

*AEP: AEP model without power source for PS-LX56P.
AEP2: AEP model with power source for PS-LX56P.

Display Window

Tuner / Preamplifier (STR-N500/N600)



- 1 Spectrum analyser
- 2 TIMER DAILY/REC/SLEEP/ON/OFF indications
- 3 SELECT 5/P.FILE indications
- 4 MEMORY indication
- 5 Frequency/Station name/Function indications
- 6 AUTO/TUNING/PRESET indications
- 7 RDS indications
- 8 Tuner indications
- 9 SURROUND indication
- 10 DBFB indication

SECTION 2
ELECTRICAL ADJUSTMENTS

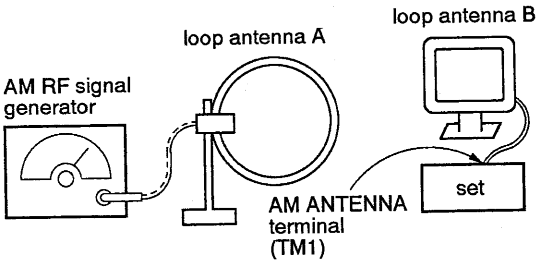
Note: As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

The FM TUNED level must be adjusted after the AM TUNED level adjustment has completed.

0 dB=1 μV

AM Section Adjustment

Setting:


loop antenna B
loop antenna A
AM RF signal generator
set
AM ANTENNA terminal (TM1)

Carrier frequency: 999 kHz (except E model)
: 1,000 kHz (E model)
Modulation: 400 Hz, 30% modulation

AM tuned Level Adjustment

Band: AM

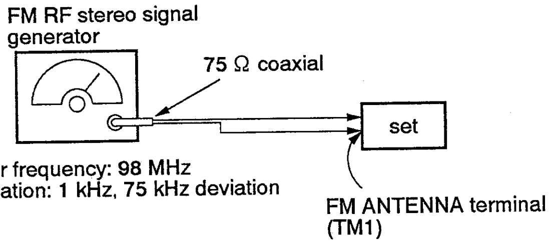
Procedure:

1. Set loop antenna A so that the loop antenna B input level becomes 316 μV (50 dBμ).
2. Tune the set to 999 kHz (except E model) or 1,000 kHz (E model).
3. Adjust RV1 so that the TUNED indicator goes on.

Adjustment Location: main board

FM Section Adjustment

Setting:


FM RF stereo signal generator
75 Ω coaxial
set
FM ANTENNA terminal (TM1)

Carrier frequency: 98 MHz
Modulation: 1 kHz, 75 kHz deviation

FM Tuned Level Adjustment

Band: FM

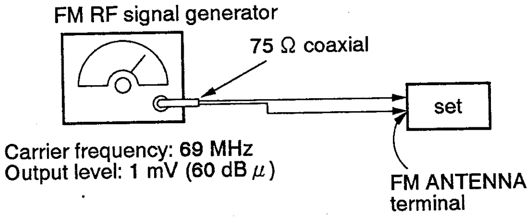
Procedure:

1. Supply a 17.8 μV (25 dBμ) 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Adjust RV2 so that the TUNED indicator goes on.

Adjustment Location: main board

FM POLAR Adjustment

Setting:
Band: FM

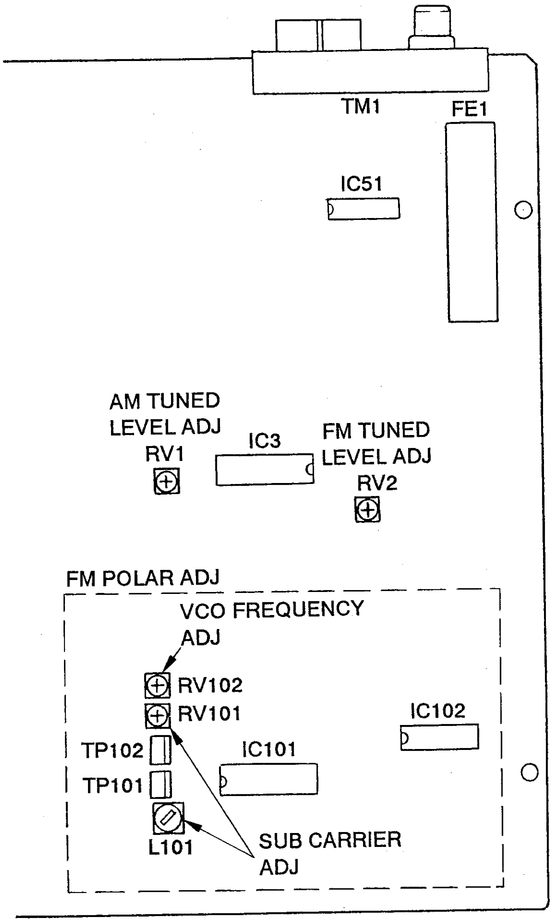

FM RF signal generator
75 Ω coaxial
set
FM ANTENNA terminal

Carrier frequency: 69 MHz
Output level: 1 mV (60 dBμ)

1. Connect the frequency counter to the TP102 and adjust the RV102 for a frequency of 31.25 kHz ± 50 Hz.
2. Connect the VTVM to the TP101, receive the signal of 69 MHz ± 1 kHz (1 kHz dev.) and adjust the reading of the VTVM to 0 dB.
3. Set the modulation frequency of the FM RF signal generator to 31.25 kHz (10 kHz dev.) and adjust the L101 so that the reading of the VTVM is 0 dB.
4. Adjust the RV101 so that the reading of the VTVM to 14 dB.
5. Check that the separation between Pins ④ and ⑭ of the IC102 is more than 18 dB.

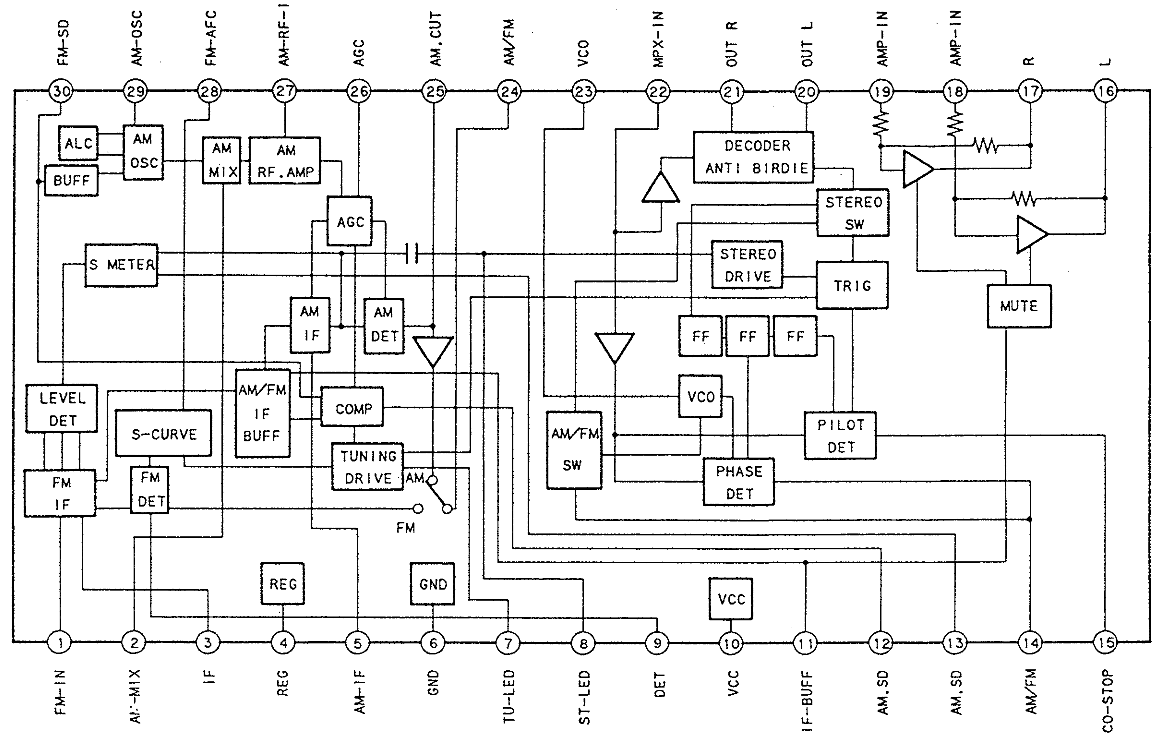
Adjustment Location: main board

[MAIN BOARD] (Component Side)

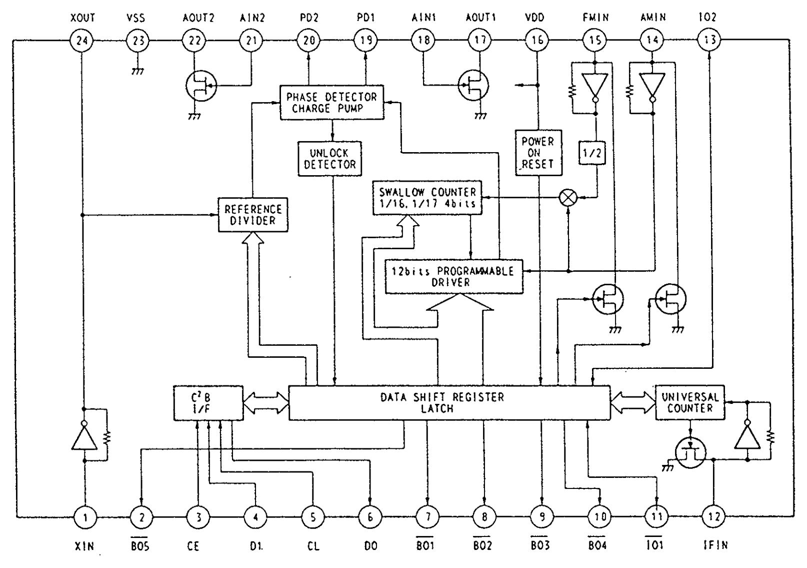

TM1
FE1
IC51
AM TUNED LEVEL ADJ RV1
IC3
FM TUNED LEVEL ADJ RV2
FM POLAR ADJ
VCO FREQUENCY ADJ
RV102
RV101
IC102
TP102
IC101
TP101
L101
SUB CARRIER ADJ

- IC Block Diagrams

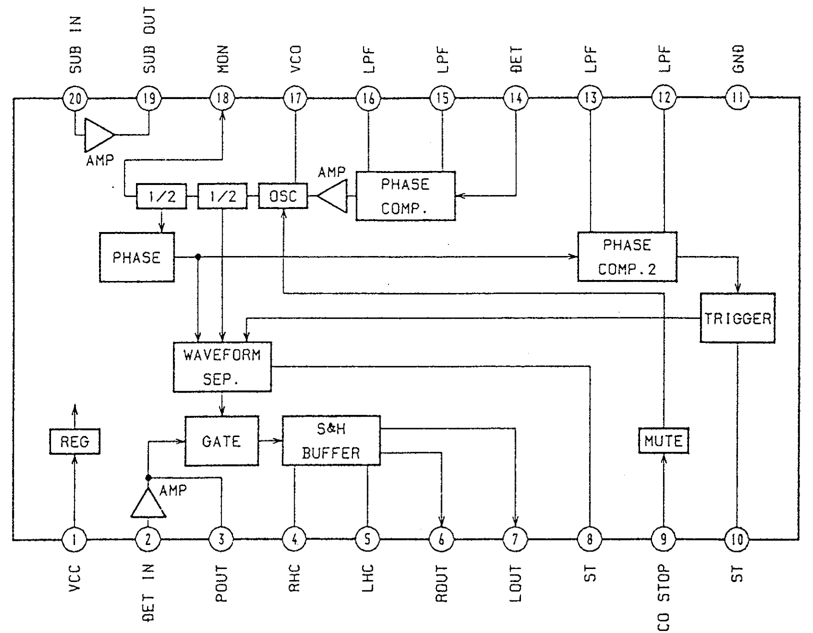
IC3 LA1835


FM-SD
AM-OSC
FM-AFC
AM-RF-IN
AGC
AM.OUT
AM/FM
VCO
MPX-IN
OUT R
OUT L
AMP-IN R
AMP-IN L
ALC
BUFF
AM OSC
AM MIX
AM RF.AMP
DECODER
ANTI BIRDIE
STEREO SW
S METER
AGC
STEREO DRIVE
TRIG
MUTE
LEVEL DET
S-CURVE
AM/FM IF BUFF
COMP
TUNING DRIVE
AM/FM SW
VCO
PILOT DET
PHASE DET
FM IF
FM DET
REG
GND
VCC
FM-IN
AM-MIX
IF
REG
AM-IF
GND
TU-LED
ST-LED
DET
VCC
IF-BUFF
AM.SD
AM.SD
AM/FM
VCO-STOP

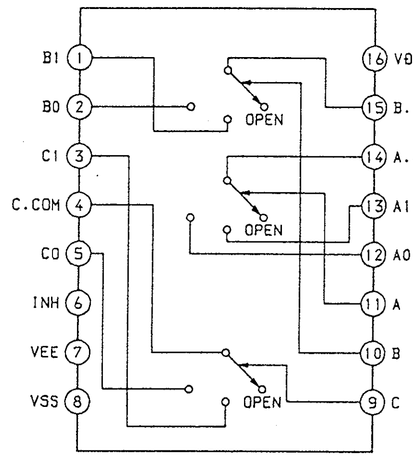
IC51 LC72130


XOUT
VSS
AOUT2
AIN2
PD2
PD1
AIN1
AOUT1
VDD
FMIN
AMIN
IO2
PHASE DETECTOR CHARGE PUMP
UNLOCK DETECTOR
POWER ON RESET
REFERENCE DIVIDER
SWALLOW COUNTER
12bits PROGRAMMABLE DRIVER
DATA SHIFT REGISTER LATCH
UNIVERSAL COUNTER
XIN
BO5
CE
DI
CL
DO
BO1
BO2
BO3
BO4
IO1
IFIN

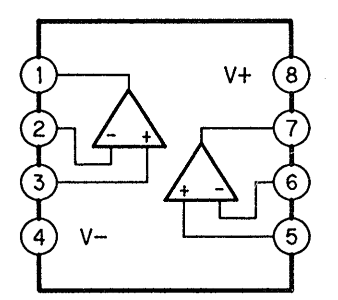
IC101 IR3R42


SUB IN
SUB OUT
MON
VCO
LPF
LPF
DET
LPF
LPF
GND
AMP
1/2
1/2
OSC
AMP
PHASE COMP.
PHASE
PHASE COMP.2
TRIGGER
WAVEFORM SEP.
REG
GATE
S&H BUFFER
MUTE
AMP
VCC
DET IN
POUT
RHC
LHC
ROUT
LOUT
ST
VCO STOP
ST

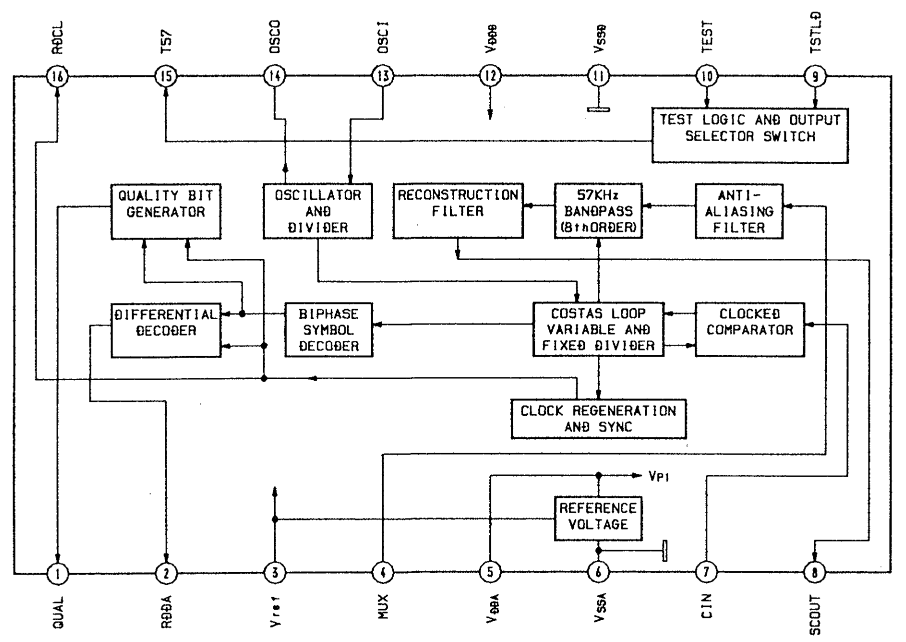
IC102 μPD4053BC


B1
B0
C1
C.COM
C0
INH
VEE
VSS
VDD
B.COM
A.COM
A1
A0
A
B
C
OPEN
OPEN
OPEN

IC201 M5218AP

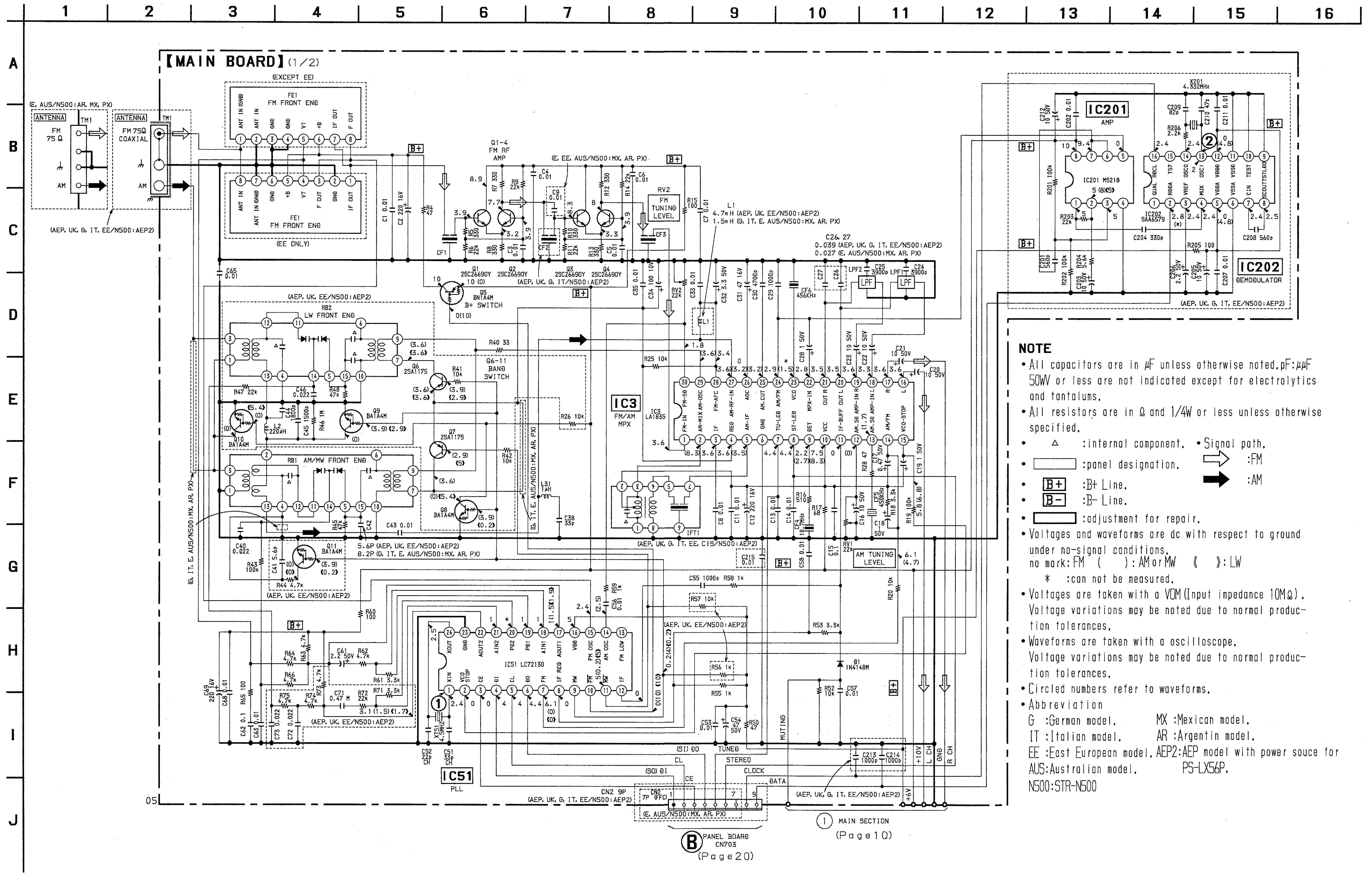


IC202 SAA6579


RACL
TEST LOGIC AND OUTPUT SELECTOR SWITCH
QUALITY BIT GENERATOR
OSCILLATOR AND DIVIDER
RECONSTRUCTION FILTER
57KHz BANDPASS (8th ORDER)
ANTI-ALIASING FILTER
DIFFERENTIAL DECODER
BIPHASE SYMBOL DECODER
COSTAS LOOP VARIABLE AND FIXED DIVIDER
CLOCKED COMPARATOR
CLOCK REGENERATION AND SYNC
REFERENCE VOLTAGE
QUAL
RDDA
Vref
MUX
CIN
SCOUT

SECTION 3
DIAGRAMS

3-1. SCHEMATIC DIAGRAM – TUNER SECTION – • EXCEPT CIS model


【MAIN BOARD】(1/2)
IC201 AMP
IC202 DEMODULATOR
IC3 FM/AM MPX
IC51 PLL
FE1 FM FRONT END
RB2 LW FRONT END
RB1 AM/MW FRONT END
PANEL BOARD CN703 (Page20)
MAIN SECTION (Page10)

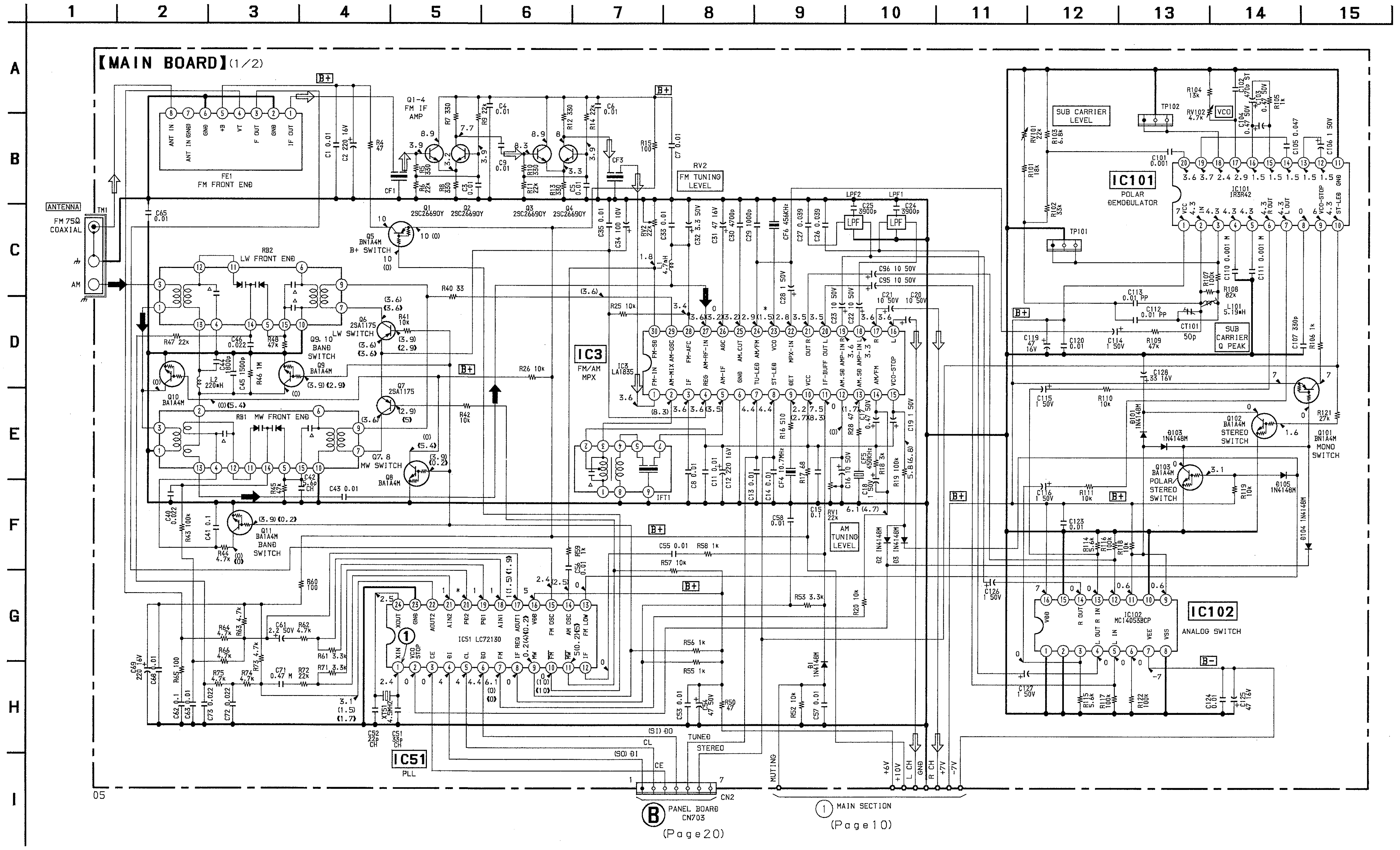
NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ :internal component.
- ▭ :panel designation.
- B+ :B+ Line.
- B− :B− Line.
- ▭ :adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM ( ): AM or MW 《 》: LW
  * :can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Abbreviation

G :German model.	MX :Mexican model.
IT :Italian model.	AR :Argentin model.
EE :East European model.	AEP2: AEP model with power souce for PS-LX56P.
AUS: Australian model.	
N500: STR-N500	

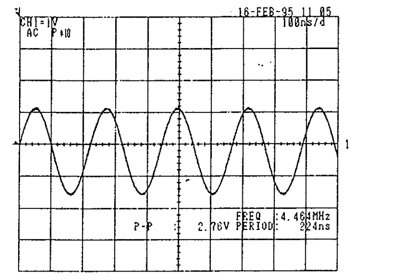
- Signal path.
  ⇨ :FM
  ➡ :AM

- CIS model

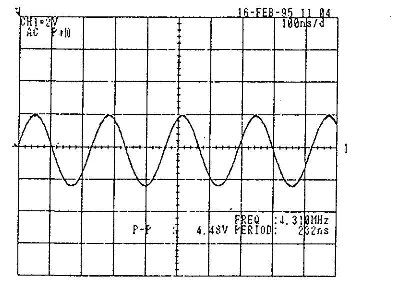

【MAIN BOARD】(1/2)
IC101 POLAR DEMODULATOR
IC102 ANALOG SWITCH
IC3 FM/AM MPX
IC51 PLL
FE1 FM FRONT END
PANEL BOARD CN703 (Page20)
MAIN SECTION (Page10)

- Waveforms

❶ IC51 ① 2.8 Vp-p
4.5 MHz

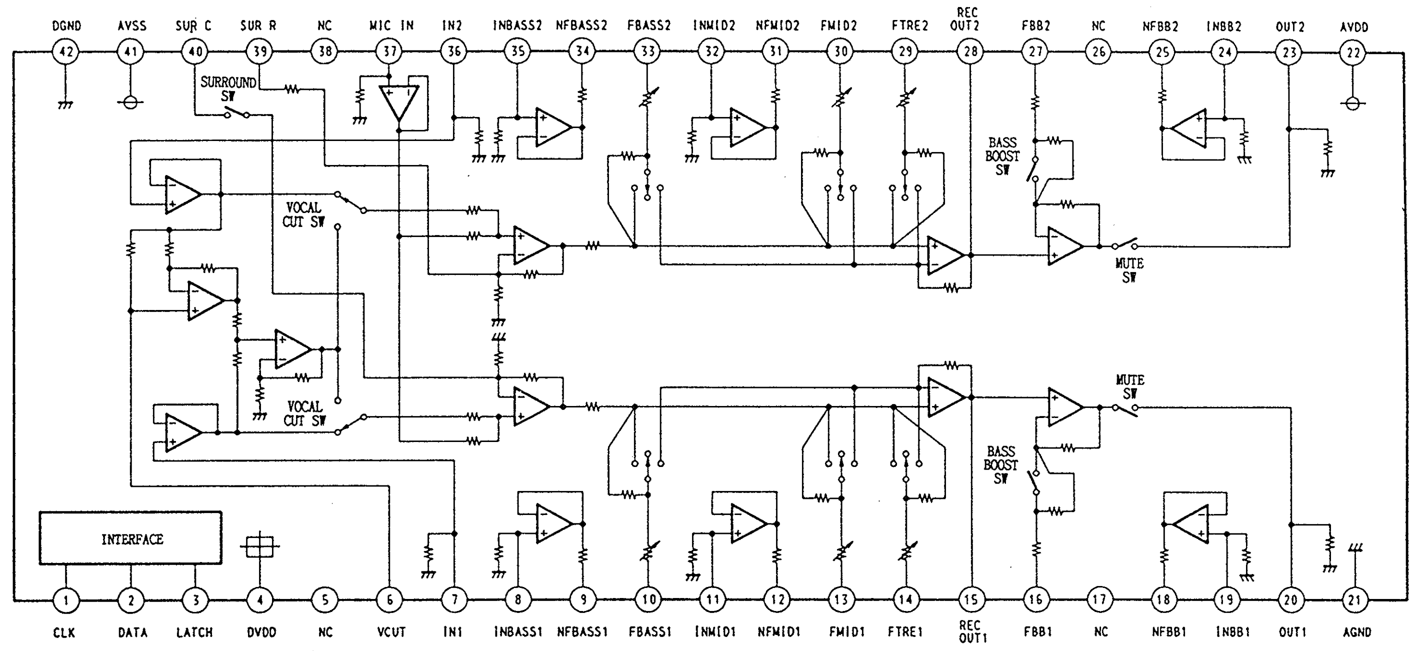


❷ IC202 ⑬ 4.5 Vp-p
4.332 MHz

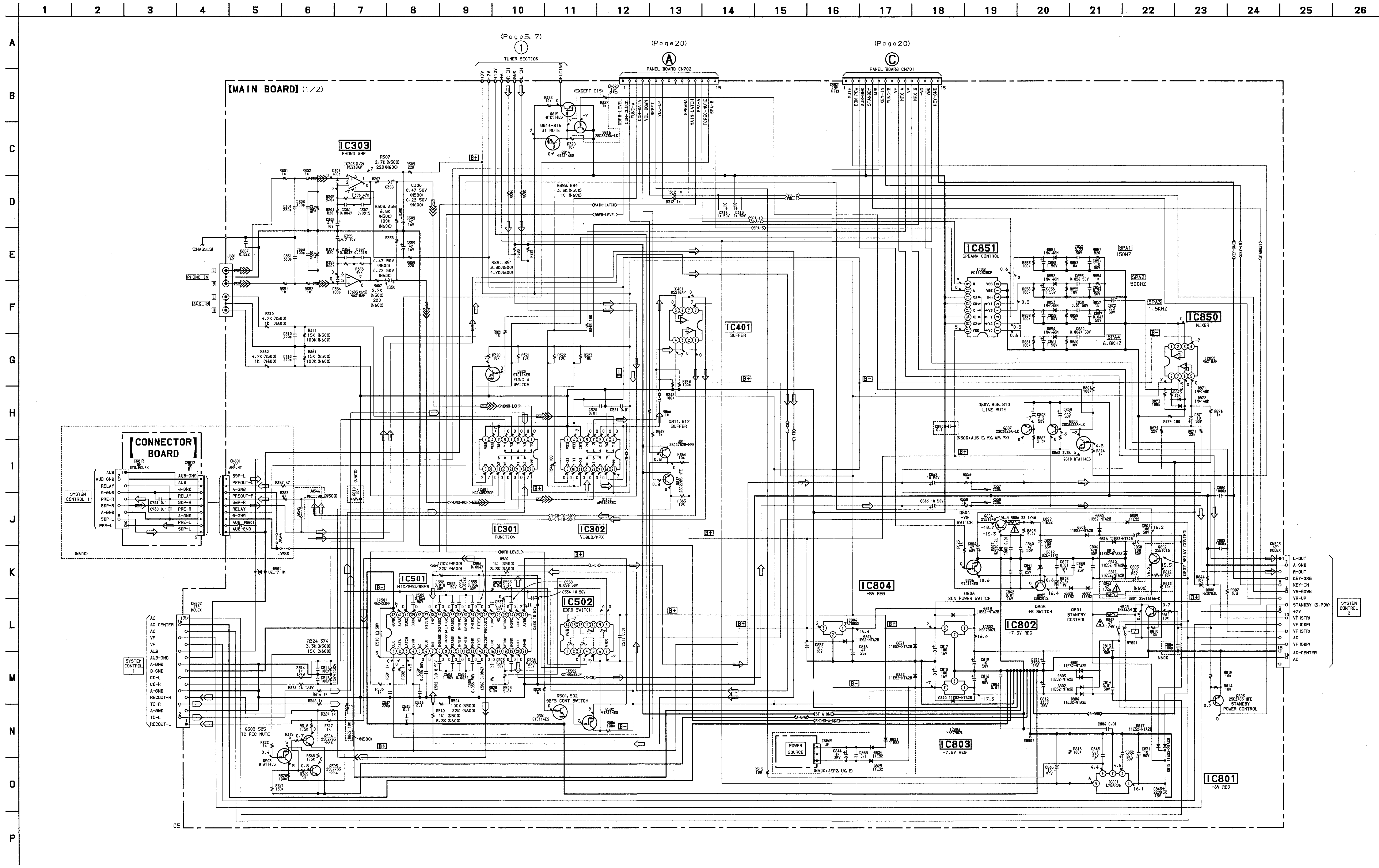


- **IC Block Diagram**

IC501 M62423FP


DGND
AVSS
SUR C
SUR R
NC
MIC IN
IN2
INBASS2
NFBASS2
FBASS2
INMID2
NFMID2
FMID2
FTRE2
REC OUT2
FBB2
NC
NFBB2
INBB2
OUT2
AVDD
SURROUND SW
VOCAL CUT SW
BASS BOOST SW
MUTE SW
INTERFACE
CLK
DATA
LATCH
DVDD
NC
VCUT
IN1
INBASS1
NFBASS1
FBASS1
INMID1
NFMID1
FMID1
FTRE1
REC OUT1
FBB1
NC
NFBB1
INBB1
OUT1
AGND

3-2. SCHEMATIC DIAGRAM – MAIN SECTION –


MAIN BOARD (1/2)
CONNECTOR BOARD
TUNER SECTION
PANEL BOARD CN702
PANEL BOARD CN701
IC303
IC851
IC850
IC401
IC301
IC302
IC501
IC502
IC804
IC802
IC803
IC801
SYSTEM CONTROL 1
SYSTEM CONTROL 2
POWER SOURCE

NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- —▭— :fusible resistor.
- ▭ :panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

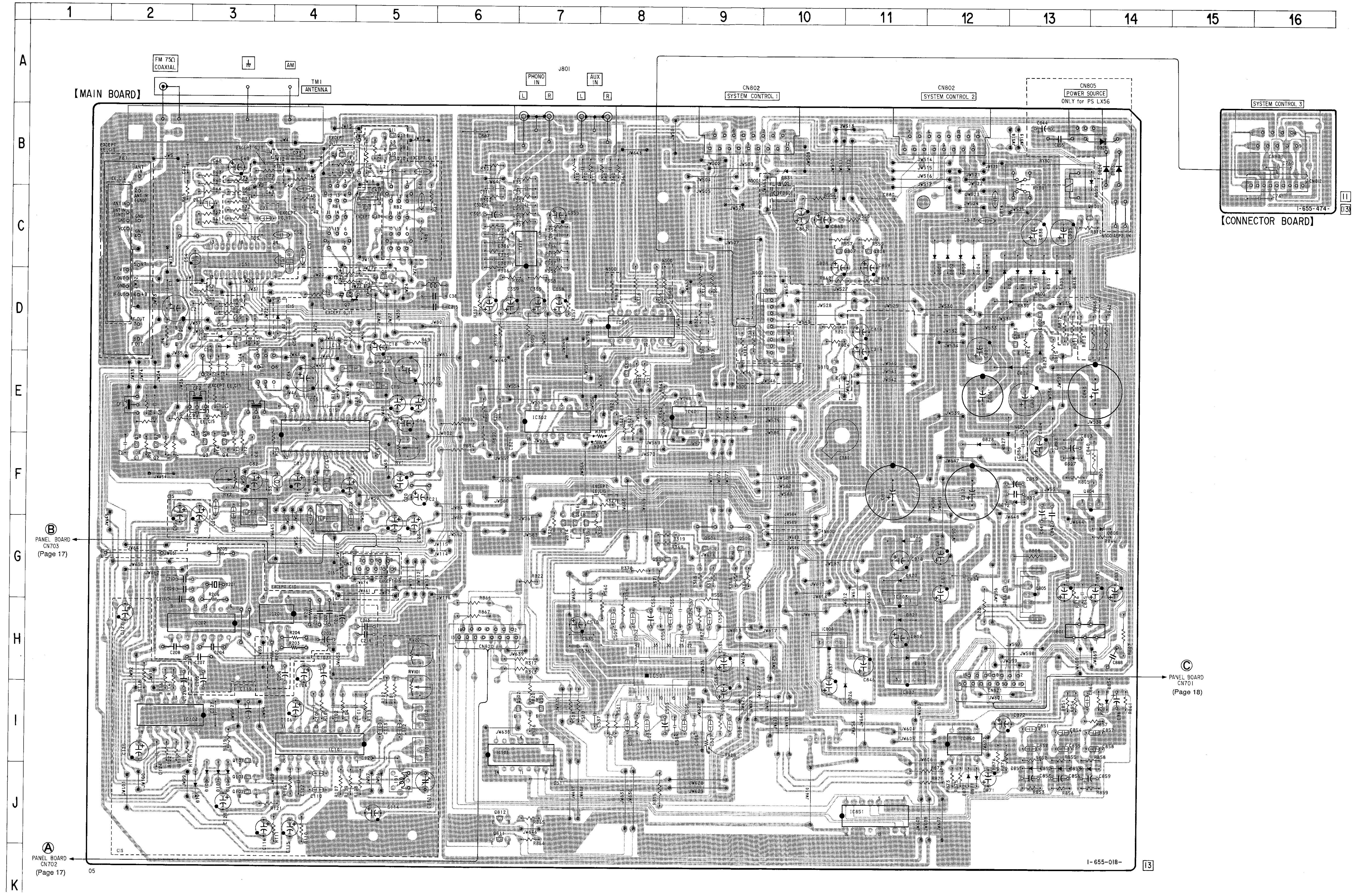
- **B+** :B+ Line. • **B−** :B− Line.
- Voltages are dc switch respect to ground under no-signal conditions.
  no mark:FM
  * :can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Abbreviation

G :German model. N500:STR-N500
IT :Italian model. N600:STR-N600
EE :East European model.
AUS:Australian model.
AR :Argentin model.
MX :Mexican model.
AEP2:AEP model with power souce for PS-LX56P.

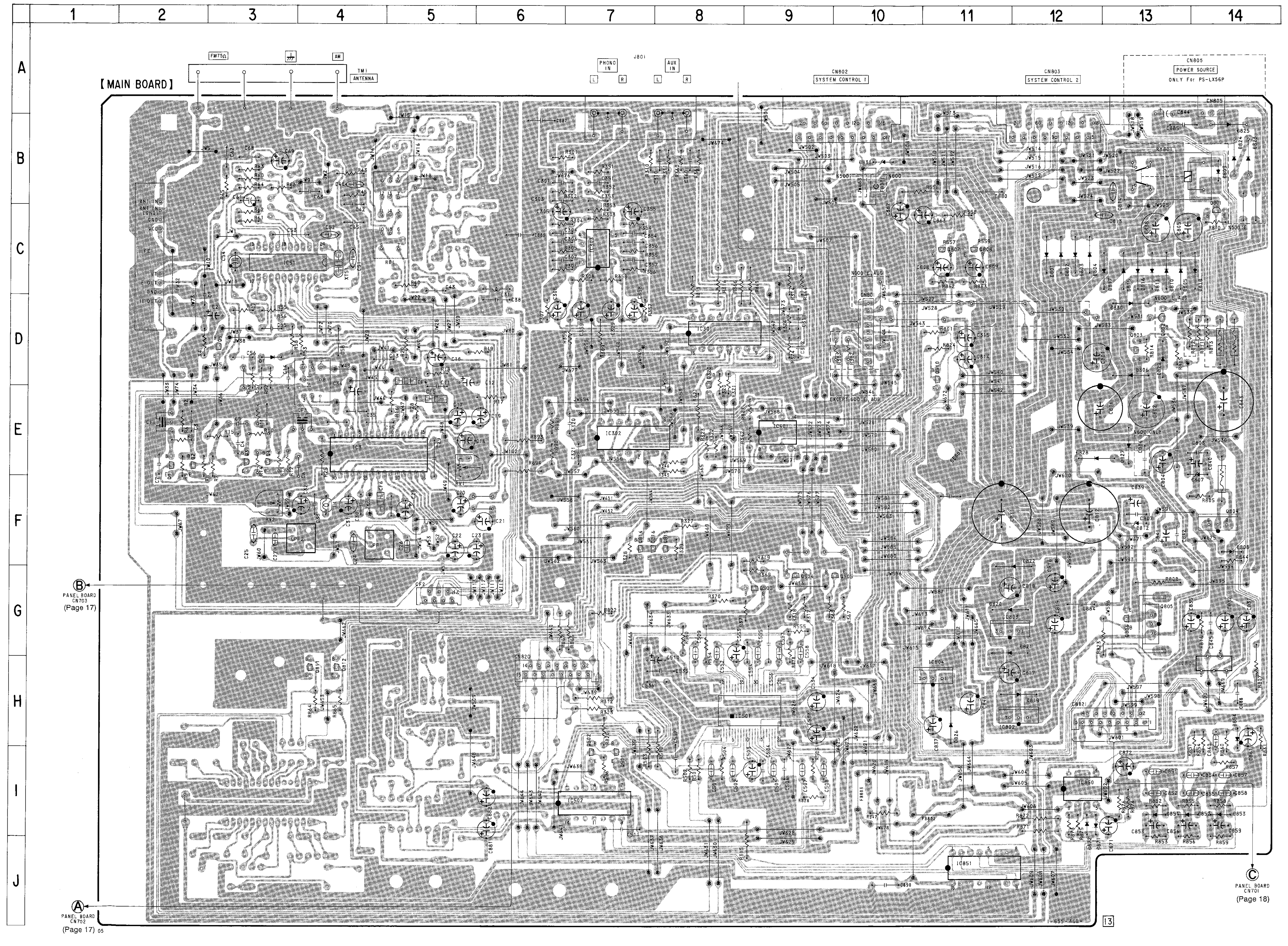
- Signal path.
  ⇨ :FM
  ▷ :PB (DECK B)
  ▷› :REC (DECK B)
  ⇛ :PHONO

3-3. PRINTED WIRING BOARDS – TUNER, MAIN SECTION –

- AEP, AEP2, UK, German, Italian, East European, CIS model (TYPE A)


【MAIN BOARD】
FM 75Ω COAXIAL
AM
TM1 ANTENNA
J801
PHONO IN
AUX IN
L
R
CN802 SYSTEM CONTROL 1
CN802 SYSTEM CONTROL 2
CN805 POWER SOURCE ONLY for PS LX56
SYSTEM CONTROL 3
CN812
CN813
1-655-474-
11
(13)
【CONNECTOR BOARD】
Ⓑ PANEL BOARD CN703 (Page 17)
Ⓒ PANEL BOARD CN701 (Page 18)
Ⓐ PANEL BOARD CN702 (Page 17)
IC851
1-655-018-
13
05
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J K

- E, Australian, Mexican, PX, Argentine model (TYPE B)


【MAIN BOARD】
TM1 ANTENNA
PHONO IN
AUX IN
CN802 SYSTEM CONTROL 1
CN802 SYSTEM CONTROL 2
CN805 POWER SOURCE
Ⓑ PANEL BOARD CN703 (Page 17)
Ⓒ PANEL BOARD CN701 (Page 18)
Ⓐ PANEL BOARD CN702 (Page 17)
13
1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J

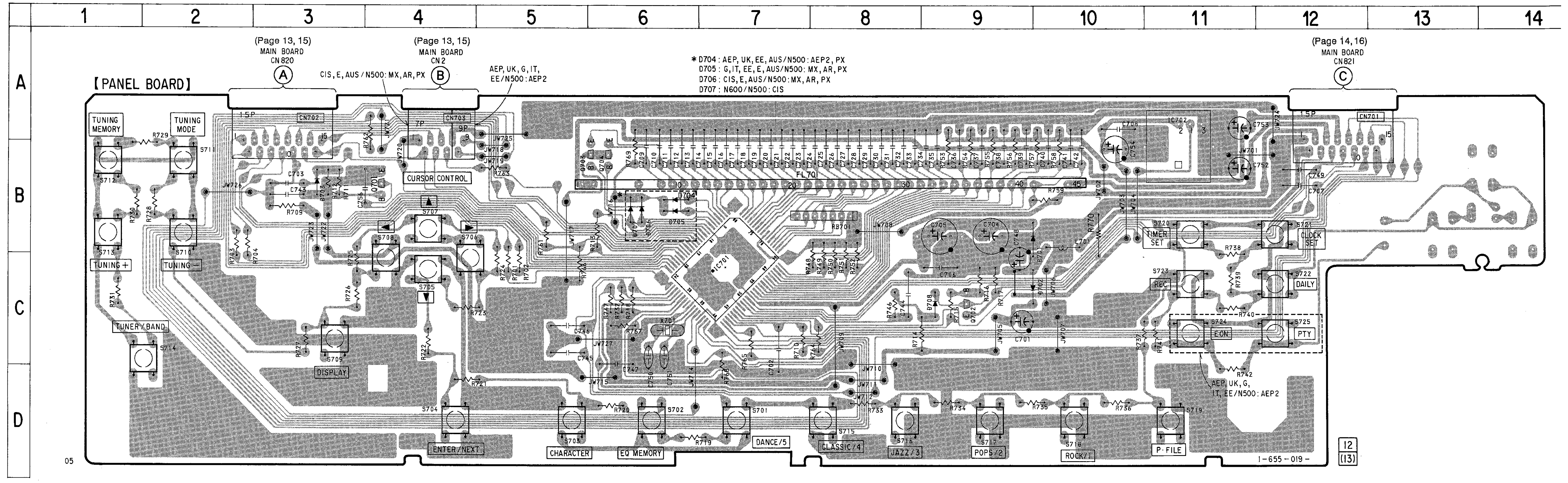
- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	D-3	IC302	E-7
D2	D-4(TYPE A)	IC303	C-7
D3	D-3(TYPE A)	IC401	E-9
D101	I-3(TYPE A)	IC501	H-8
D103	I-3(TYPE A)	IC502	I-6
D104	I-3(TYPE A)	IC801	H-14
D105	I-3(TYPE A)	IC802	H-11
D801	C-12	IC803	G-11
D802	C-12	IC804	H-10(TYPE A)
D803	C-12	IC804	H-11(TYPE B)
D804	C-12	IC850	I-12
D805	C-13	IC851	J-11
D806	D-13		
D807	E-13	Q1	E-2
D808	F-14	Q2	E-2
D809	B-14	Q3	E-3(TYPE A)
D810	C-13	Q4	E-3(TYPE A)
D811	F-13	Q5	D-2(TYPE A)
D812	F-13	Q5	D-3(TYPE B)
D815	C-12(TYPE A)	Q6	C-5(TYPE A)
D815	C-13(TYPE B)	Q7	D-4(TYPE A)
D816	C-13	Q8	B-5(TYPE A)
D817	C-12(TYPE A)	Q9	B-4(TYPE A)
D817	C-13(TYPE B)	Q10	B-5(TYPE A)
D818	C-13(TYPE A)	Q11	B-5(TYPE A)
D818	C-14(TYPE B)	Q101	I-3(TYPE A)
D819	H-11	Q102	J-3(TYPE A)
D820	G-11	Q103	I-3(TYPE A)
D821	G-11	Q320	D-8
D822	F-11(TYPE A)	Q501	H-7
D822	F-12(TYPE B)	Q502	H-7
D823	B-14	Q503	G-8
D824	B-14	Q504	G-9
D825	B-14	Q505	G-9
D826	H-11	Q801	C-14
D827	E-13	Q802	D-13
D829	D-13	Q803	D-13
D830	D-13	Q804	F-14
D831	B-10	Q805	G-13
D851	I-13	Q806	G-13
D852	I-13	Q807	C-10(TYPE A)
D853	I-14	Q807	C-11(TYPE B)
D854	H-14	Q808	C-11
D872	I-12	Q810	D-10
		Q811	J-6(TYPE A)
IC3	E-4	Q811	H-4(TYPE B)
IC51	C-3	Q812	J-6(TYPE A)
IC101	I-4(TYPE A)	Q812	H-4(TYPE B)
IC102	I-2	Q814	F-7
IC201	G-3(TYPE A)	Q815	F-7(TYPE A)
IC202	G-2	Q815	F-8(TYPE B)
IC301	D-8	Q816	F-7

Note:

- ○——— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ▨ : Pattern from the side which enables seeing.
- Abbreviation
  G : German
  IT : Italian
  AUS : Australian
  EE : East European
  MX : Mexican
  AR : Argentine
  AEP2 : AEP model with power source for PS-LX56P.
  N500: STR-N500 N600: STR-N600

3-4. PRINTED WIRING BOARD – PANEL SECTION –


【PANEL BOARD】
(Page 13, 15) MAIN BOARD CN820 Ⓐ
(Page 13, 15) MAIN BOARD CN2 Ⓑ
(Page 14, 16) MAIN BOARD CN821 Ⓒ
CIS, E, AUS/N500: MX, AR, PX
AEP, UK, G, IT, EE/N500: AEP2
＊D704: AEP, UK, EE, AUS/N500: AEP2, PX
D705: G, IT, EE, E, AUS/N500: MX, AR, PX
D706: CIS, E, AUS/N500: MX, AR, PX
D707: N600/N500: CIS
TUNING MEMORY
TUNING MODE
TUNING +
TUNING –
TUNER/BAND
DISPLAY
CURSOR CONTROL
FL701
CLOCK SET
DAILY
TIMER SET
EON
PTY
REC
INTER/NEXT
CHARACTER
EQ MEMORY
DANCE/5
CLASSIC/4
JAZZ/3
POPS/2
ROCK/1
P FILE
1-655-019-
12 (13)

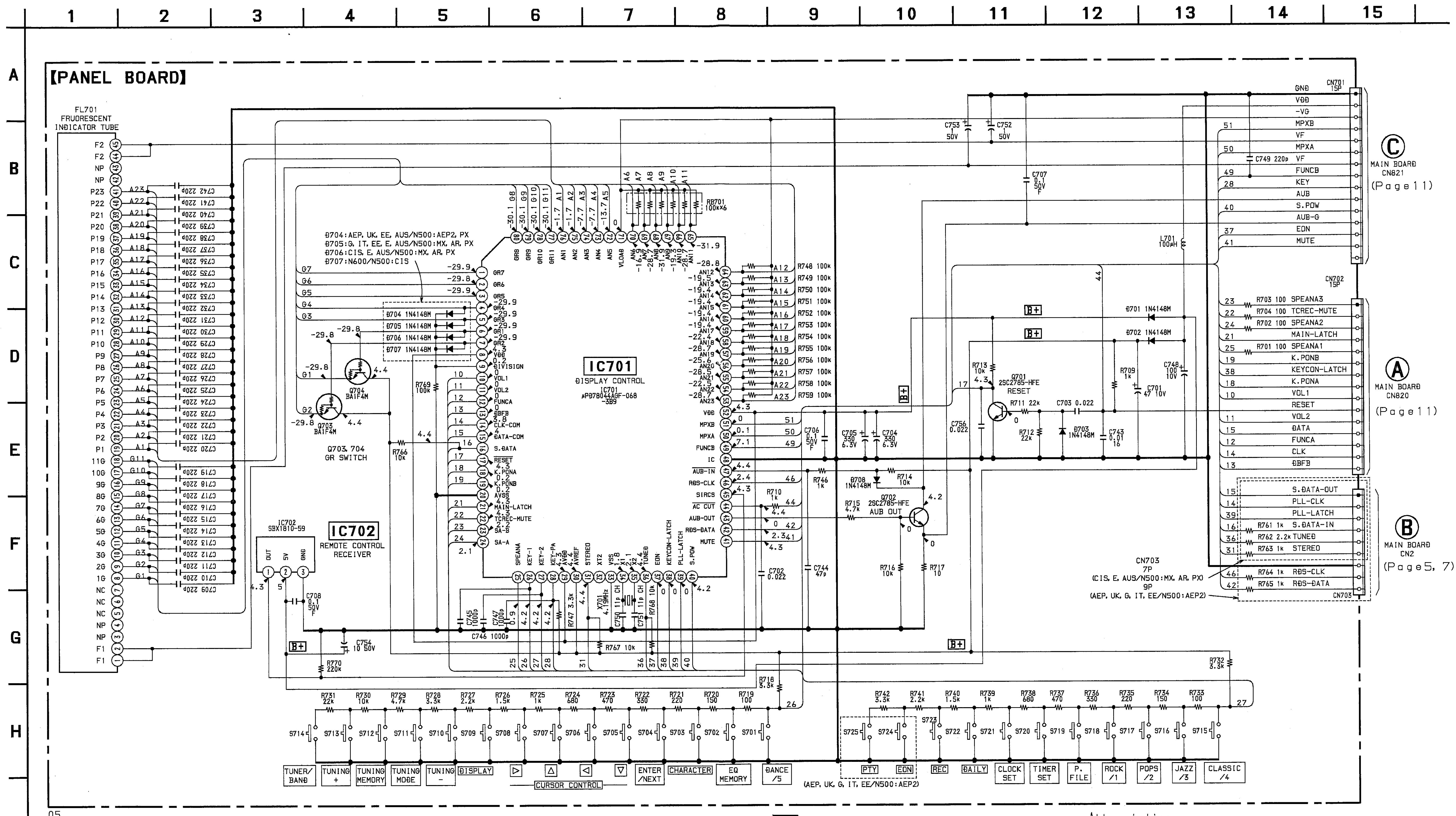
• Semiconductor Location

Ref. No.	Location
D701	B-10
D702	B-10
D703	B-3
D704	B-6
D705	B-6
D706	B-6
D707	B-6
D708	C-9
IC701	C-7
IC702	A-11
Q701	B-4
Q702	C-9
Q703	B-6
Q704	B-6

Note:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ▨ : Pattern from the side which enables seeing.
- Abbreviation
  G : German
  IT : Italian
  AUS : Australian
  EE : East European
  MX : Mexican
  AR : Argentine
  AEP2 : AEP model with power source for PS-LX56P.
  N500: STR-N500 N600: STR-N600

3-5. SCHEMATIC DIAGRAM – PANEL SECTION –


【PANEL BOARD】
FL701 FLUORESCENT INDICATOR TUBE
IC701 DISPLAY CONTROL
IC702 REMOTE CONTROL RECEIVER
Q703, 704 DR SWITCH
Q701 RESET
Q702 AUB OUT
CN701 Ⓒ MAIN BOARD CN821 (Page 11)
CN702 Ⓐ MAIN BOARD CN820 (Page 11)
CN703 Ⓑ MAIN BOARD CN2 (Page 5, 7)
D704: AEP, UK, EE, AUS/N500: AEP2, PX
D705: G, IT, EE, E, AUS/N500: MX, AR, PX
D706: CIS, E, AUS/N500: MX, AR, PX
D707: N600/N500: CIS
CN703 7P (CIS, E, AUS/N500: MX, AR, PX) 9P (AEP, UK, G, IT, EE/N500: AEP2)
TUNER/BAND
TUNING +
TUNING MEMORY
TUNING MODE
TUNING –
DISPLAY
CURSOR CONTROL
ENTER/NEXT
CHARACTER
EQ MEMORY
DANCE/5
PTY
EON
(AEP, UK, G, IT, EE/N500: AEP2)
REC
DAILY
CLOCK SET
TIMER SET
P. FILE
ROCK/1
POPS/2
JAZZ/3
CLASSIC/4

NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- ☐ :panel designation.

- B+ :B+ Line.
- Voltages are dc with respect to ground under no-signal conditions.
  no mark:
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

- Abbreviation
  G :German model. N500:STR-N500
  IT :Italian model. N600:STR-N600
  EE :East European model.
  AUS:Australian model.
  MX:Mexican model
  AR:Argentin model.
  AEP2:AEP model with power source for PS-LX56P

3-6. IC PIN FUNCTION DESCRIPTION
DISPLAY BOARD IC701 μPD78044AGF-068-3B9 (DISPLAY CONTROL)

Pin No.	Pin Name	I/O	Function
1-5	GR7-GR3	O	FL grid signal output.
6, 7	GR1, 2	O	
8	VDD	—	Power supply. (+B)
9	DIVISION	I	Division select input.
10	VOL 1	O	Volume encoder signal output.
11	VOL 2	O	
12	FUNCA	O	Input selector control signal output.
13	DBFB	O	DBFB switching signal output.
14	CLK-COM	O	Serial clock output. (LC72130, M62423)
15	DATA-COM	O	Serial data output. (LC72130, M62423)
16	S. DATA	I	Serial data input. (LC72130)
17	$\overline{\text{RESET}}$	I	Reset signal input.
18	K. PONA	O	Not used.
19	K. PONB	O	
20	AVSS	—	Power supply. (GND)
21	MAIN-LATCH	O	Serial latch output. (M62423)
22	TCREC-MUTE	O	Mute signal for TC REC.
23	SA-B	O	Not used.
24	SA-A	O	
25	SPEANA	I	Control signal input for spectram analizer.
26, 27	KEY-1, 2	I	Key matrix input.
28	KEY-PA	I	Key matrix input.
29	AVDD	—	Power supply. (GND)
30	AVREF	—	A/D converter. Reference terminal.
31	STEREO	I	Stereo detection signal from tuner.
32	XT2	—	Not used.
33	VSS	—	Power supply. (GND)
34	X1	—	X'tal (4.19 MHz)
35	X2	—	
36	TUNED	I	Tuned detection signal from tuner.
37	EON	O	Tuner block power control output.
38	KEYCON-LATCH	O	Latch signal for M65840.
39	PLL-LATCH	O	Latch signal for LC72130.
40	S. POW	O	System power on signal output.

Pin No.	Pin Name	I/O	Function
41	MUTE	O	Mute signal for AMP.
42	RDS-DATA	I	RDS data input. (SAA6579T)
43	AUB-OUT	O	AUBUS output.
44	$\overline{\text{AC CUT}}$	I	Power detect input terminal.
45	SIRCS	I	SIRCS signal input.
46	RDS-CLK	I	RDS clock input. (SAA6579T)
47	$\overline{\text{AUB-IN}}$	I	AUBUS input.
48	IC	—	(Connect to GND.)
49	FUNCB	O	Input selector control signal output.
50, 51	MPXA/B	O	Control signal output for MPX.
52	VDD	—	Power supply. (+B)
53-70	AN23-6	O	FL segment signal output.
71	VLOAD	—	Driving power for FL display panel.
72-76	AN5-1	O	FL segment signal output.
77-80	GR11-8	O	FL grid signal output.

SECTION 4
EXPLODED VIEW

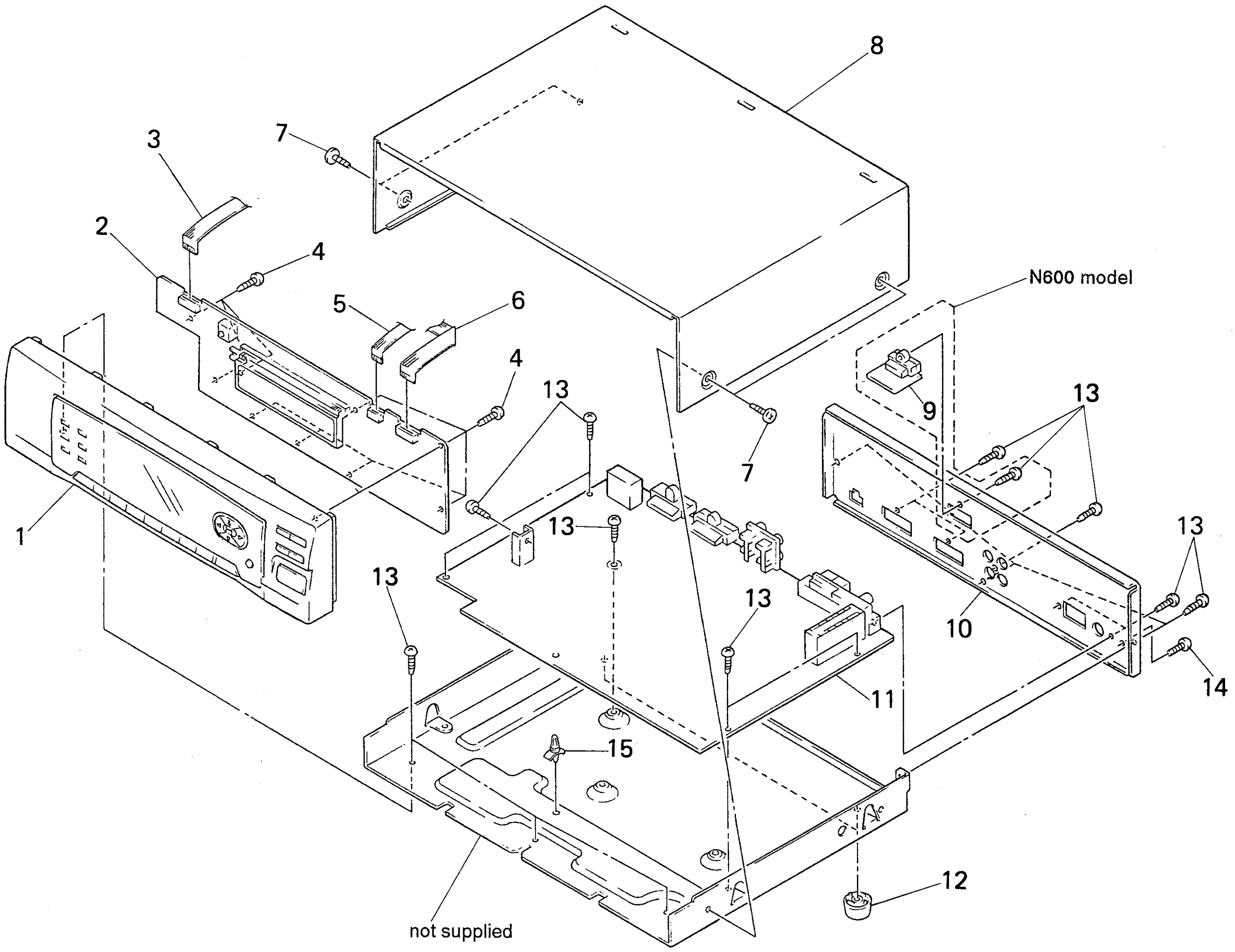
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Items marked "∗" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- Abbreviations

IT:Italian	G:German	EE:East European	AEP:AEP model without power souce for PS-LX56P.
MX:Mexican	AUS:Australian	AR:Argentin	AEP2:AEP model with power souce for PS-LX56P.



Ref. No.	Part No.	Description	Remark
1	X-4945-599-1	PANEL ASSY, FRONT (N500:AEP, AEP2, UK, G, IT, EE)	
1	X-4945-600-1	PANEL ASSY, FRONT (N500:E, MX, AR)	
1	X-4945-602-1	PANEL ASSY, FRONT (N600:AEP, UK, G, IT, EE)	
1	X-4945-620-1	PANEL ASSY, FRONT (N500:CIS, AUS, PX)	
1	X-4945-965-1	PANEL ASSY, FRONT (N600:CIS, AUS)	
1	X-4946-159-1	PANEL ASSY, FRONT (N600:E)	
* 2	A-4377-261-A	PANEL BOARD, COMPLETE (N500:AEP, AEP2, UK)	
* 2	A-4377-818-A	PANEL BOARD, COMPLETE (N600:EE)	
* 2	A-4377-820-A	PANEL BOARD, COMPLETE (N600:CIS)	
* 2	A-4377-824-A	PANEL BOARD, COMPLETE (N500:AUS, PX)	
* 2	A-4377-827-A	PANEL BOARD, COMPLETE (N500:EE)	
* 2	A-4377-832-A	PANEL BOARD, COMPLETE (N600:AEP, UK)	
* 2	A-4377-833-A	PANEL BOARD, COMPLETE (N500:E, MX, AR)	
* 2	A-4377-835-A	PANEL BOARD, COMPLETE (N500:CIS)	
* 2	A-4377-919-A	PANEL BOARD, COMPLETE (N500:G, IT)	
* 2	A-4377-928-A	PANEL BOARD, COMPLETE (N600:G, IT)	
* 2	A-4378-420-A	PANEL BOARD, COMPLETE (N600:E)	
* 2	A-4378-423-A	PANEL BOARD, COMPLETE (N600:AUS)	
3	1-769-544-11	WIRE (FLAT TYPE) (15 CORE)	
4	4-951-620-01	SCREW (2.6X8), +BVTP	
5	1-769-546-11	WIRE (FLAT TYPE) (7 CORE) (CIS, E, AUS/N500:MX, AR, PX)	
5	1-769-547-11	WIRE (FLAT TYPE) (9 CORE) (AEP, UK, G, IT, EE/N500:AEP2)	
6	1-769-545-11	WIRE (FLAT TYPE) (15 CORE)	
7	3-363-099-01	SCREW (CASE 3 TP2)	
8	4-969-777-11	CASE	
* 9	1-655-474-11	CONNECTOR BOARD (N600)	
* 10	4-969-784-02	PANEL, BACK (N500:UK)	
* 10	4-969-784-11	PANEL, BACK (N500:AEP, G, IT)	
* 10	4-969-784-21	PANEL, BACK (N500:EE, CIS)	
* 10	4-969-784-41	PANEL, BACK (N600:AEP, UK, G, IT)	
* 10	4-969-784-51	PANEL, BACK (N600:EE, CIS)	
* 10	4-970-163-02	PANEL, BACK (N500:E)	
* 10	4-970-163-11	PANEL, BACK (N500:MX, AUS, PX)	
* 10	4-970-163-41	PANEL, BACK (N500:AR)	
* 10	4-970-163-51	PANEL, BACK (N600:E)	
* 10	4-970-163-61	PANEL, BACK (N600:AUS)	
* 10	4-973-530-01	PANEL, BACK (N500:AEP2)	
* 11	A-4377-390-A	MAIN BOARD, COMPLETE (N500:AEP)	
* 11	A-4377-391-A	MAIN BOARD, COMPLETE (N500:CIS)	
* 11	A-4377-392-A	MAIN BOARD, COMPLETE (N500:E)	
* 11	A-4377-394-A	MAIN BOARD, COMPLETE (N600:AEP, UK)	
* 11	A-4377-819-A	MAIN BOARD, COMPLETE (N600:EE)	
* 11	A-4377-821-A	MAIN BOARD, COMPLETE (N600:CIS)	
* 11	A-4377-825-A	MAIN BOARD, COMPLETE (N500:MX, AR, AUS, PX)	
* 11	A-4377-828-A	MAIN BOARD, COMPLETE (N500:EE)	
* 11	A-4377-830-A	MAIN BOARD, COMPLETE (N500:UK)	
* 11	A-4377-920-A	MAIN BOARD, COMPLETE (N500:G, IT)	
* 11	A-4377-922-A	MAIN BOARD, COMPLETE (N500:AEP2)	
* 11	A-4377-929-A	MAIN BOARD, COMPLETE (N600:G, IT)	
* 11	A-4378-421-A	MAIN BOARD, COMPLETE (N600:E, AUS)	
12	X-4941-228-1	FOOT ASSY	
13	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
14	7-682-548-04	SCREW +BVTT 3X8 (S)	
15	4-924-098-21	HOLDER, PC BOARD	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Abbreviations

IT:Italian	G:German	EE:East European	AEP:AEP model without power souce for PS-LX56P./
MX:Mexican	AUS:Australian	AR:Argentin	AEP2:AEP model with power souce for PS-LX56P.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	1-655-474-11	CONNECTOR BOARD (N600)	
		**********************	
		< CAPACITOR >	
C760	1-164-159-11	CERAMIC 0.1uF 50V	(N600)
C761	1-164-159-11	CERAMIC 0.1uF 50V	(N600)
		< CONNECTOR >	
CN813	1-770-249-41	HOUSING, CONNECTOR(PC BOARD)9P	(N600)
**			
	A-4377-390-A	MAIN BOARD, COMPLETE (N500:AEP)	
*	A-4377-922-A	MAIN BOARD, COMPLETE (N500:AEP2)	
*	A-4377-830-A	MAIN BOARD, COMPLETE (N500:UK)	
*	A-4377-920-A	MAIN BOARD, COMPLETE (N500:G, IT)	
*	A-4377-828-A	MAIN BOARD, COMPLETE (N500:EE)	
*	A-4377-391-A	MAIN BOARD, COMPLETE (N500:CIS)	
*	A-4377-392-A	MAIN BOARD, COMPLETE (N500:E)	
*	A-4377-825-A	MAIN BOARD, COMPLETE (N500:MX, AR, AUS, PX)	
	A-4377-394-A	MAIN BOARD, COMPLETE (N600:AEP, UK)	
*	A-4377-929-A	MAIN BOARD, COMPLETE (N600:G, IT)	
*	A-4377-819-A	MAIN BOARD, COMPLETE (N600:EE)	
*	A-4377-821-A	MAIN BOARD, COMPLETE (N600:CIS)	
*	A-4378-421-A	MAIN BOARD, COMPLETE (N600:E, AUS)	
		*******************************	
	1-537-770-11	TERMINAL BOARD, GROUND	(N500:AEP, AEP2, G, IT)
		< CAPACITOR >	
C1	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C2	1-126-934-11	ELECT 220uF 20% 16V	
C3	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C4	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C5	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C6	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C7	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C8	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C9	1-101-004-00	CERAMIC 0.01uF 50V	(EE, CIS, E, AUS/N500:MX, AR, PX)
C11	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C12	1-126-934-11	ELECT 220uF 20% 16V	
C13	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C14	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C15	1-164-159-11	CERAMIC 0.1uF 50V	
C16	1-126-964-11	ELECT 10uF 20% 50V	
C17	1-124-902-00	ELECT 0.47uF 20% 50V	
C18	1-124-903-11	ELECT 1uF 20% 50V	
C19	1-124-903-11	ELECT 1uF 20% 50V	
C20	1-126-964-11	ELECT 10uF 20% 50V	
C21	1-126-964-11	ELECT 10uF 20% 50V	
C22	1-126-964-11	ELECT 10uF 20% 50V	
C23	1-126-964-11	ELECT 10uF 20% 50V	
C24	1-137-436-11	FILM 0.0039uF 5% 50V	
C25	1-137-436-11	FILM 0.0039uF 5% 50V	
C26	1-136-160-00	FILM 0.039uF 5% 50V	(AEP, UK, G, IT, EE, CIS/N500:AEP2)
C26	1-136-158-00	FILM 0.027uF 5% 50V	(E, AUS/N500:MX, AR, PX)
C27	1-136-160-00	FILM 0.039uF 5% 50V	(AEP, UK, G, IT, EE, CIS/N500:AEP2)
C27	1-136-158-00	FILM 0.027uF 5% 50V	(E, AUS/N500:MX, AR, PX)
C28	1-124-903-11	ELECT 1uF 20% 50V	
C29	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C30	1-162-600-11	CERAMIC 0.0047uF 30% 16V	
C31	1-126-967-11	ELECT 47uF 20% 16V	
C32	1-126-111-11	ELECT 3.3uF 20% 50V	
C33	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C34	1-126-933-11	ELECT 100uF 20% 10V	
C35	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C38	1-162-211-31	CERAMIC 33PF 5% 50V	
C40	1-101-005-00	CERAMIC 0.22uF 50V	
C41	1-164-159-11	CERAMIC 0.1uF 50V	(AEP, UK, EE, CIS/N500:AEP2)
C42	1-162-196-31	CERAMIC 5.6PF 10% 50V	(AEP, UK, EE, CIS/N500:AEP2)
C42	1-162-198-31	CERAMIC 8.2PF 10% 50V	(G, IT, E, AUS/N500:MX, AR, PX)
C43	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C44	1-102-120-00	CERAMIC 0.0018uF 10% 50V	(AEP, UK, EE, CIS/N500:AEP2)

MAIN

Ref. No.	Part No.	Description	Remark
C45	1-162-301-11	CERAMIC 0.0015uF 30% 16V	(AEP, UK, EE, CIS/N500:AEP2)
C46	1-101-005-00	CERAMIC 0.022uF 50V	(AEP, UK, EE, CIS/N500:AEP2)
C51	1-164-031-11	CERAMIC 33PF 5% 50V	
C52	1-164-027-11	CERAMIC 22PF 5% 50V	
C53	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C54	1-126-967-11	ELECT 47uF 20% 16V	
C55	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C56	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C57	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C58	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C61	1-124-925-11	ELECT 2.2uF 20% 100V	
C62	1-164-159-11	CERAMIC 0.1uF 50V	
C63	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C65	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C68	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C69	1-126-934-11	ELECT 220uF 20% 16V	
C71	1-136-173-00	FILM 0.47uF 5% 50V	(AEP, UK, EE, CIS/N500:AEP2)
C72	1-161-494-00	CERAMIC 0.022uF 25V	(AEP, UK, EE, CIS/N500:AEP2)
C73	1-161-494-00	CERAMIC 0.022uF 25V	(AEP, UK, EE, CIS/N500:AEP2)
C95	1-124-907-11	ELECT 10uF 20% 50V(CIS)	
C96	1-124-907-11	ELECT 10uF 20% 50V(CIS)	
C101	1-162-294-31	CERAMIC 0.001uF 10% 50V(CIS)	
C102	1-130-014-00	FILM 470PF 5% 50V(CIS)	
C103	1-124-902-00	ELECT 0.47uF 20% 50V(CIS)	
C104	1-124-902-00	ELECT 0.47uF 20% 50V(CIS)	
C105	1-164-098-11	CERAMIC 0.047uF 12V(CIS)	
C106	1-124-903-11	ELECT 1uF 20% 50V(CIS)	
C107	1-162-288-31	CERAMIC 330PF 10% 50V(CIS)	
C110	1-130-471-00	MYLAR 0.001uF 5% 50V(CIS)	
C111	1-130-471-00	MYLAR 0.001uF 5% 50V(CIS)	
C112	1-130-736-11	FILM 0.01uF 5% 50V(CIS)	
C113	1-130-736-11	FILM 0.01uF 5% 50V(CIS)	
C114	1-124-903-11	ELECT 1uF 20% 50V(CIS)	
C115	1-124-903-11	ELECT 1uF 20% 50V(CIS)	
C116	1-124-903-11	ELECT 1uF 20% 50V(CIS)	
C119	1-104-664-11	ELECT 47uF 20% 16V(CIS)	
C120	1-162-306-11	CERAMIC 0.01uF 30% 16V(CIS)	
C123	1-162-306-11	CERAMIC 0.01uF 30% 16V(CIS)	
C124	1-162-306-11	CERAMIC 0.01uF 30% 16V(CIS)	
C125	1-104-664-11	ELECT 47uF 20% 16V(CIS)	
C126	1-124-903-11	ELECT 1uF 20% 50V(CIS)	
C127	1-124-903-11	ELECT 1uF 20% 50V(CIS)	
C128	1-104-663-11	ELECT 33uF 20% 16V(CIS)	
C201	1-162-291-31	CERAMIC 560PF 10% 50V	(AEP, UK, G, IT, EE/N500:AEP2)

Ref. No.	Part No.	Description	Remark
C202	1-162-306-11	CERAMIC 0.01uF 30% 16V	(AEP, UK, G, IT, EE/N500:AEP2)
C203	1-126-964-11	ELECT 10uF 20% 50V	(AEP, UK, G, IT, EE/N500:AEP2)
C204	1-162-288-31	CERAMIC 330PF 10% 50V	(AEP, UK, G, IT, EE/N500:AEP2)
C205	1-126-964-11	ELECT 10uF 20% 50V	(AEP, UK, G, IT, EE/N500:AEP2)
C206	1-124-925-11	ELECT 2.2uF 20% 100V	(AEP, UK, G, IT, EE/N500:AEP2)
C207	1-162-306-11	CERAMIC 0.01uF 30% 16V	(AEP, UK, G, IT, EE/N500:AEP2)
C208	1-162-291-31	CERAMIC 560PF 10% 50V	(AEP, UK, G, IT, EE/N500:AEP2)
C209	1-102-527-11	CERAMIC 82PF 5% 50V	(AEP, UK, G, IT, EE/N500:AEP2)
C210	1-101-880-00	CERAMIC 47PF 5% 50V	(AEP, UK, G, IT, EE/N500:AEP2)
C211	1-162-306-11	CERAMIC 0.01uF 30% 16V	(AEP, UK, G, IT, EE/N500:AEP2)
C212	1-126-964-11	ELECT 10uF 20% 50V	(AEP, UK, G, IT, EE/N500:AEP2)
C213	1-162-294-31	CERAMIC 0.001uF 10% 50V	(AEP, UK, G, IT, EE/N500:AEP2)
C214	1-162-294-31	CERAMIC 0.001uF 10% 50V	(AEP, UK, G, IT, EE/N500:AEP2)
C215	1-162-306-11	CERAMIC 0.01uF 30% 16V	(AEP, UK, G, IT, EE, CIS/N500:AEP2)
C301	1-162-288-31	CERAMIC 330PF 10% 50V	
C303	1-162-282-31	CERAMIC 100PF 10% 50V	
C304	1-162-282-31	CERAMIC 100PF 10% 50V	
C305	1-126-963-11	ELECT 4.7uF 20% 50V	
C306	1-162-600-11	CERAMIC 0.0047uF 30% 16V	
C307	1-162-301-11	CERAMIC 0.0015uF 30% 16V	
C308	1-124-902-00	ELECT 0.47uF 20% 50V	(N500)
C308	1-124-464-11	ELECT 0.22uF 20% 50V	(N600)
C309	1-126-967-11	ELECT 47uF 20% 16V	
C310	1-162-286-21	CERAMIC 220PF 10% 50V	
C311	1-162-282-31	CERAMIC 100PF 10% 50V	
C312	1-162-282-31	CERAMIC 100PF 10% 50V	
C314	1-124-903-11	ELECT 1uF 20% 50V	
C315	1-124-903-11	ELECT 1uF 20% 50V	
C320	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C321	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C351	1-162-288-31	CERAMIC 330PF 10% 50V	
C353	1-162-282-31	CERAMIC 100PF 10% 50V	
C354	1-162-282-31	CERAMIC 100PF 10% 50V	
C355	1-126-963-11	ELECT 4.7uF 20% 50V	
C356	1-162-600-11	CERAMIC 0.0047uF 30% 16V	
C357	1-162-301-11	CERAMIC 0.0015uF 30% 16V	
C358	1-124-902-00	ELECT 0.47uF 20% 50V	(N500)

Ref. No.	Part No.	Description			Remark
C358	1-124-464-11	ELECT	0.22uF	20%	50V (N600)
C359	1-126-967-11	ELECT	47uF	20%	16V
C360	1-162-286-21	CERAMIC	220PF	10%	50V
C501	1-136-162-00	FILM	0.056uF	5%	50V
C502	1-136-156-00	FILM	0.018uF	5%	50V
C503	1-124-903-11	ELECT	1uF	20%	50V
C504	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C505	1-136-162-00	FILM	0.056uF	5%	50V
C506	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C507	1-136-169-00	FILM	0.22uF	5%	50V
C508	1-136-162-00	FILM	0.056uF	5%	50V
C509	1-136-162-00	FILM	0.056uF	5%	50V
C510	1-126-964-11	ELECT	10uF	20%	50V
C511	1-162-306-11	CERAMIC	0.01uF	30%	16V
C533	1-126-964-11	ELECT	10uF	20%	50V
C534	1-126-964-11	ELECT	10uF	20%	50V
C535	1-164-159-11	CERAMIC	0.1uF		50V
C536	1-164-159-11	CERAMIC	0.1uF		50V
C537	1-162-286-21	CERAMIC	220PF	10%	50V
C552	1-136-156-00	FILM	0.018uF	5%	50V
C553	1-124-903-11	ELECT	1uF	20%	50V
C554	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C555	1-136-162-00	FILM	0.056uF	5%	50V
C556	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C557	1-136-169-00	FILM	0.22uF	5%	50V
C558	1-136-162-00	FILM	0.056uF	5%	50V
C801	1-124-122-11	ELECT	100uF	20%	50V
C802	1-128-576-11	ELECT	100uF	20%	63V
C803	1-162-306-11	CERAMIC	0.01uF	30%	16V
C804	1-128-552-51	ELECT	47uF	20%	63V
C805	1-124-122-11	ELECT	100uF	20%	50V
C806	1-126-971-11	ELECT	470uF	20%	50V
C807	1-162-306-11	CERAMIC	0.01uF	30%	16V
C808	1-124-925-11	ELECT	2.2uF	20%	100V
C809	1-124-925-11	ELECT	2.2uF	20%	100V
C811	1-126-944-11	ELECT	3300uF	20%	25V
C812	1-126-944-11	ELECT	3300uF	20%	25V
C813	1-101-004-00	CERAMIC	0.01uF		50V
C814	1-101-004-00	CERAMIC	0.01uF		50V
C815	1-126-964-11	ELECT	10uF	20%	50V
C816	1-126-964-11	ELECT	10uF	20%	50V
C817	1-126-933-11	ELECT	100uF	20%	16V
C818	1-126-933-11	ELECT	100uF	20%	16V
C831	1-126-964-11	ELECT	10uF	20%	50V
C832	1-124-463-00	ELECT	0.1uF	20%	50V
C835	1-126-964-11	ELECT	10uF	20%	50V
C837	1-126-933-11	ELECT	100uF	20%	10V
C838	1-124-122-11	ELECT	100uF	20%	50V
C839	1-124-477-11	ELECT	47uF	20%	25V
C840	1-126-967-11	ELECT	47uF	20%	50V
C841	1-124-478-11	ELECT	100uF	20%	25V
C842	1-162-306-11	CERAMIC	0.01uF	30%	16V
C843	1-126-943-11	ELECT	2200uF	20%	25V
C844	1-124-477-11	ELECT	47uF	20%	25V
					(N500:AEP2, UK, E)
C845	1-164-159-11	CERAMIC	0.1uF		50V
C846	1-124-477-11	ELECT	47uF	20%	25V
C851	1-136-177-00	FILM	1uF	5%	50V
C852	1-136-169-00	FILM	0.22uF	5%	50V
C853	1-124-903-11	ELECT	1uF	20%	50V
C854	1-136-169-00	FILM	0.22uF	5%	50V
C855	1-136-162-00	FILM	0.056uF	5%	50V
C856	1-124-903-11	ELECT	1uF	20%	50V
C857	1-136-161-00	FILM	0.047uF	5%	50V
C858	1-136-153-00	FILM	0.01uF	5%	50V
C859	1-124-903-11	ELECT	1uF	20%	50V
C860	1-130-479-00	MYLAR	0.0047uF	5%	50V
C861	1-124-903-11	ELECT	1uF	20%	50V
C862	1-126-964-11	ELECT	10uF	20%	50V
C863	1-126-964-11	ELECT	10uF	20%	50V
C871	1-126-964-11	ELECT	10uF	20%	50V
C872	1-124-925-11	ELECT	2.2uF	20%	100V
C880	1-162-294-31	CERAMIC	0.001uF	10%	50V
C883	1-162-306-11	CERAMIC	0.01uF	30%	16V
C884	1-162-306-11	CERAMIC	0.01uF	30%	16V
C885	1-164-159-11	CERAMIC	0.1uF		50V
					(N500:AEP2, UK, E)
C886	1-162-282-31	CERAMIC	100PF	10%	50V (N600)
C887	1-161-494-00	CERAMIC	0.022uF		25V
C888	1-162-294-31	CERAMIC	0.001uF	10%	50V
C890	1-164-159-11	CERAMIC	0.1uF		50V
					(N500:E, MX, AR, AU, PX)
		< FILTER >			
CF1	1-567-389-11	FILTER, CERAMIC			
CF2	1-760-393-11	FILTER, CERAMIC			(AEP, UK, G, IT/N500:AEP2)
CF3	1-760-393-11	FILTER, CERAMIC			(AEP, UK, G, IT/N500:AEP2)
CF3	1-567-389-11	FILTER, CERAMIC			(EE, CIS, E, AUS/N500:MX, AR, PX)
CF4	1-760-220-11	FILTER, CERAMIC (10.7MHz)			
CF5	1-527-981-00	FILTER, CERAMIC (450KHz)			
CF6	1-577-075-11	OSCILLATOR, CERAMIC (456KHz)			
		< CONNECTOR >			
* CN2	1-568-828-11	SOCKET, CONNECTOR 9P			(AEP, UK, G, IT, EE/N500:AEP2)
* CN2	1-568-826-11	SOCKET, CONNECTOR 7P			(CIS, E, AUS/N500:MX, AR, PX)

MAIN

Ref. No.	Part No.	Description	Remark
* CN801	1-568-936-11	PIN, CONNECTOR 9P (N600)	
CN802	1-764-017-11	HOUSING, CONNECTOR(PC BOARD)17P	
CN803	1-770-248-31	HOUSING, CONNECTOR(PC BOARD)16P	
* CN805	1-566-210-11	PIN, CONNECTOR 3P (POWER SOURCE)	(N500:AEP2, UK, E)
* CN820	1-568-834-11	SOCKET, CONNECTOR 15P	
* CN821	1-568-834-11	SOCKET, CONNECTOR 15P	

< TRIMMER >

Ref. No.	Part No.	Description	Remark
CT101	1-141-260-00	CAP, TRIMMER 50PF (CIS)	

< DIODE >

Ref. No.	Part No.	Description	Remark
D1	8-719-987-63	DIODE 1N4148M	
D2	8-719-987-63	DIODE 1N4148M (CIS)	
D3	8-719-987-63	DIODE 1N4148M (CIS)	
D101	8-719-987-63	DIODE 1N4148M (CIS)	
D103	8-719-987-63	DIODE 1N4148M (CIS)	
D104	8-719-987-63	DIODE 1N4148M (CIS)	
D105	8-719-987-63	DIODE 1N4148M (CIS)	
D801	8-719-024-99	DIODE 11ES2-NTA2B	
D802	8-719-024-99	DIODE 11ES2-NTA2B	
D803	8-719-024-99	DIODE 11ES2-NTA2B	
D804	8-719-024-99	DIODE 11ES2-NTA2B	
D805	8-719-024-99	DIODE 11ES2-NTA2B	
D806	8-719-024-99	DIODE 11ES2-NTA2B	
D807	8-719-934-22	DIODE HZS30-2L	
D808	8-719-933-48	DIODE HZS7B3L	
D809	8-719-987-63	DIODE 1N4148M	
D810	8-719-024-99	DIODE 11ES2-NTA2B	
D811	8-719-024-99	DIODE 11ES2-NTA2B	
D812	8-719-001-42	DIODE UZL-11M1	
D815	8-719-024-99	DIODE 11ES2-NTA2B	
D816	8-719-024-99	DIODE 11ES2-NTA2B	
D817	8-719-024-99	DIODE 11ES2-NTA2B	
D818	8-719-024-99	DIODE 11ES2-NTA2B	
D819	8-719-024-99	DIODE 11ES2-NTA2B	
D820	8-719-024-99	DIODE 11ES2-NTA2B	
D821	8-719-024-99	DIODE 11ES2-NTA2B	
D822	8-719-024-99	DIODE 11ES2-NTA2B	
D823	8-719-024-99	DIODE 11ES2-NTA2B (N500:AEP2, UK, E)	
D824	8-719-024-99	DIODE 11ES2-NTA2B (N500:AEP2, UK, E)	
D825	8-719-024-99	DIODE 11ES2-NTA2B (N500:AEP2, UK, E)	
D826	8-719-024-99	DIODE 11ES2-NTA2B	
D827	8-719-024-99	DIODE 11ES2-NTA2B	
D828	8-719-024-99	DIODE 11ES2-NTA2B	
D829	8-719-024-99	DIODE 11ES2-NTA2B	
D830	8-719-024-99	DIODE 11ES2-NTA2B	
D831	8-719-000-84	DIODE UZL-7M1	
D851	8-719-987-63	DIODE 1N4148M	
D852	8-719-987-63	DIODE 1N4148M	
D853	8-719-987-63	DIODE 1N4148M	
D854	8-719-987-63	DIODE 1N4148M	
D871	8-719-987-63	DIODE 1N4148M	
D872	8-719-815-85	DIODE 1S1585	

< TERMINAL >

Ref. No.	Part No.	Description	Remark
EB801	1-537-770-11	TERMINAL BOARD, GROUND	(UK, EE, CIS, E, AUS, /N500:MX, AR, PX)

< FERRITE BEAD >

Ref. No.	Part No.	Description	Remark
FB801	1-412-473-21	INDUCTOR 0UH (N600)	

< FRONT END >

Ref. No.	Part No.	Description	Remark
FE1	1-693-253-21	FRONT END (4 GANG)	(AEP, UK, G, IT/N500:AEP2)
FE1	1-693-244-21	FRONT END (3 GANG) (EE, CIS)	
FE1	1-693-090-51	FRONT END (FM) (2 GANG)	(E, AUS/N500:MX, AR, PX)

< IC >

Ref. No.	Part No.	Description	Remark
IC3	8-759-176-03	IC LA1835	
IC51	8-759-288-54	IC LC72130	
IC101	8-759-063-04	IC IR3R42 (CIS)	
IC102	8-759-140-53	IC uPD4053BC (CIS)	
IC201	8-759-634-51	IC M5218AP (AEP, UK, G, IT, EE/N500:AEP2)	
IC202	8-759-169-99	IC SAA6579 (AEP, UK, G, IT, EE/N500:AEP2)	
IC301	8-759-000-48	IC MC14052BCP	
IC302	8-759-140-53	IC uPD4053BC	
IC303	8-759-634-51	IC M5218AP	
IC401	8-759-634-51	IC M5218AP	
IC501	8-759-291-98	IC M62423FP	
IC502	8-759-000-49	IC MC14066BCP	
IC801	8-759-820-13	IC L78MR06	
IC802	8-759-604-86	IC M5F7807L	
IC803	8-759-604-90	IC M5F7907L	
IC804	8-759-231-53	IC TA7805S	
IC850	8-759-634-51	IC M5218AP	
IC851	8-759-000-48	IC MC14052BCP	

< IFT >

Ref. No.	Part No.	Description	Remark
IFT1	1-409-636-11	TRANSFORMER, IF(CERAMIC FILTER)	

< JACK >

Ref. No.	Part No.	Description	Remark
* J801	1-580-912-11	JACK, PIN 4P(PHONO/AUX IN)	(N600:AEP, G, IT/N500)
J801	1-580-905-11	JACK, PIN (PHONO/AUX IN)	(N600:UK, EE, CIS, E, AUS)

< COIL >

Ref. No.	Part No.	Description	Remark
L1	1-407-500-00	INDUCTOR 4.7mH	(AEP,UK,EE,CIS/N500:AEP2)
L1	1-410-688-31	INDUCTOR 1.5mH	(G,IT,E,AUS/N500:MX,AR,PX)
L2	1-410-524-41	INDUCTOR 220uH	(AEP/N500:AEP2)
L2	1-410-525-11	INDUCTOR 220uH	(UK,EE,CIS)
L31	1-414-142-11	INDUCTOR 1uH	
L101	1-409-497-11	COIL (FILTER)	(CIS)

< FILTER >

Ref. No.	Part No.	Description	Remark
LPF1	1-239-597-11	FILTER, LOW PASS	
LPF2	1-239-597-11	FILTER, LOW PASS	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q3	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q4	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q5	8-729-422-57	TRANSISTOR UN4111	
Q6	8-729-119-76	TRANSISTOR 2SA1175-HFE	(AEP,UK,EE,CIS/N500:AEP2)
Q7	8-729-119-76	TRANSISTOR 2SA1175-HFE	(AEP,UK,EE,CIS/N500:AEP2)
Q8	8-729-900-80	TRANSISTOR DTC114ES	(AEP,UK,EE,CIS/N500:AEP2)
Q9	8-729-900-80	TRANSISTOR DTC114ES	(AEP,UK,EE,CIS/N500:AEP2)
Q10	8-729-900-80	TRANSISTOR DTC114ES	(AEP,UK,EE,CIS/N500:AEP2)
Q11	8-729-900-80	TRANSISTOR DTC114ES	(AEP,UK,EE,CIS/N500:AEP2)
Q101	8-729-422-57	TRANSISTOR UN4111	(CIS)
Q102	8-729-900-80	TRANSISTOR DTC114ES	(CIS)
Q103	8-729-900-80	TRANSISTOR DTC114ES	(CIS)
Q320	8-729-900-80	TRANSISTOR DTC114ES	
Q501	8-729-900-80	TRANSISTOR DTC114ES	
Q502	8-729-422-57	TRANSISTOR UN4111	
Q503	8-729-422-57	TRANSISTOR UN4111	
Q504	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q505	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-111-29	TRANSISTOR 2SD1616A-K	
Q802	8-729-801-84	TRANSISTOR 2SB1013-4	(N600)
Q803	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q804	8-729-030-19	TRANSISTOR 2SB1640	
Q805	8-729-209-15	TRANSISTOR 2SD2012	
Q806	8-729-900-80	TRANSISTOR DTC114ES	
Q807	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q808	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q810	8-729-422-57	TRANSISTOR UN4111	
Q811	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q812	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q814	8-729-422-57	TRANSISTOR UN4111	
Q815	8-729-900-80	TRANSISTOR DTC114ES	
Q816	8-729-141-30	TRANSISTOR 2SC3623A-LK	(EXCEPT CIS)

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R4	1-249-401-11	CARBON 47 5% 1/4W	
R5	1-249-411-11	CARBON 330 5% 1/4W	
R6	1-249-433-11	CARBON 22K 5% 1/4W	
R7	1-249-411-11	CARBON 330 5% 1/4W	
R8	1-249-411-11	CARBON 330 5% 1/4W	
R9	1-249-433-11	CARBON 22K 5% 1/4W	
R10	1-249-411-11	CARBON 330 5% 1/4W	
R11	1-249-433-11	CARBON 22K 5% 1/4W	(AEP,UK,G,IT,EE,CIS/N500:AEP2)
R11	1-249-411-11	CARBON 330 5% 1/4W	(E,AUS/N500:MX,AR,PX)
R12	1-249-411-11	CARBON 330 5% 1/4W	
R13	1-249-411-11	CARBON 330 5% 1/4W	(AEP,UK,G,IT,EE,CIS/N500:AEP2)
R14	1-249-433-11	CARBON 22K 5% 1/4W	(AEP,UK,G,IT,EE,CIS/N500:AEP2)
R15	1-249-405-11	CARBON 100 5% 1/4W	
R16	1-249-442-11	CARBON 510 5% 1/4W	
R17	1-249-403-11	CARBON 68 5% 1/4W	
R18	1-249-423-11	CARBON 3.3K 5% 1/4W	
R19	1-249-441-11	CARBON 100K 5% 1/4W	
R20	1-249-429-11	CARBON 10K 5% 1/4W	
R25	1-249-429-11	CARBON 10K 5% 1/4W	
R26	1-249-429-11	CARBON 10K 5% 1/4W	(AEP,UK,EE,CIS/N500:AEP2)
R28	1-249-401-11	CARBON 47 5% 1/4W	
R40	1-249-399-11	CARBON 33 5% 1/4W	
R41	1-249-429-11	CARBON 10K 5% 1/4W	(AEP,UK,EE,CIS/N500:AEP2)
R42	1-249-429-11	CARBON 10K 5% 1/4W	(AEP,UK,EE,CIS/N500:AEP2)
R43	1-249-441-11	CARBON 100K 5% 1/4W	
R44	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP,UK,EE,CIS/N500:AEP2)
R45	1-249-437-11	CARBON 47K 5% 1/4W	
R46	1-247-903-00	CARBON 1M 5% 1/4W	(AEP,UK,EE,CIS/N500:AEP2)
R47	1-249-433-11	CARBON 22K 5% 1/4W	(AEP,UK,EE,CIS/N500:AEP2)
R48	1-249-437-11	CARBON 47K 5% 1/4W	(AEP,UK,EE,CIS/N500:AEP2)
R50	1-249-401-11	CARBON 47 5% 1/4W	
R52	1-249-429-11	CARBON 10K 5% 1/4W	
R53	1-249-423-11	CARBON 3.3K 5% 1/4W	
R55	1-249-417-11	CARBON 1K 5% 1/4W	
R56	1-249-417-11	CARBON 1K 5% 1/4W	(AEP,UK,EE,CIS/N500:AEP2)

MAIN

Ref. No.	Part No.	Description	Remark
R57	1-249-417-11	CARBON 1K 5% 1/4W	(AEP, UK, EE, CIS/N500:AEP2)
R58	1-249-417-11	CARBON 1K 5% 1/4W	
R59	1-249-417-11	CARBON 1K 5% 1/4W	
R60	1-249-405-11	CARBON 100 5% 1/4W	
R61	1-249-423-11	CARBON 3.3K 5% 1/4W	
R62	1-249-425-11	CARBON 4.7K 5% 1/4W	
R63	1-249-425-11	CARBON 4.7K 5% 1/4W	
R64	1-249-425-11	CARBON 4.7K 5% 1/4W	
R65	1-247-807-31	CARBON 100 5% 1/4W	
R66	1-249-425-11	CARBON 4.7K 5% 1/4W	
R71	1-249-423-11	CARBON 3.3K 5% 1/4W	(AEP, UK, EE, CIS/N500:AEP2)
R72	1-249-433-11	CARBON 22K 5% 1/4W	(AEP, UK, EE, CIS/N500:AEP2)
R73	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, EE, CIS/N500:AEP2)
R74	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, EE, CIS/N500:AEP2)
R75	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, EE, CIS/N500:AEP2)
R101	1-249-432-11	CARBON 18K 5% 1/4W	(CIS)
R102	1-249-435-11	CARBON 33K 5% 1/4W	(CIS)
R103	1-249-427-11	CARBON 6.8K 5% 1/4W	(CIS)
R104	1-247-858-11	CARBON 13K 5% 1/4W	(CIS)
R105	1-249-417-11	CARBON 1K 5% 1/4W	(CIS)
R106	1-249-417-11	CARBON 1K 5% 1/4W	(CIS)
R107	1-249-441-11	CARBON 100K 5% 1/4W	(CIS)
R108	1-249-440-11	CARBON 82K 5% 1/4W	(CIS)
R109	1-249-437-11	CARBON 47K 5% 1/4W	(CIS)
R110	1-249-429-11	CARBON 10K 5% 1/4W	(CIS)
R111	1-249-429-11	CARBON 10K 5% 1/4W	(CIS)
R114	1-249-426-11	CARBON 5.6K 5% 1/4W	(CIS)
R115	1-249-426-11	CARBON 5.6K 5% 1/4W	(CIS)
R116	1-249-441-11	CARBON 100K 5% 1/4W	(CIS)
R117	1-249-441-11	CARBON 100K 5% 1/4W	(CIS)
R118	1-249-429-11	CARBON 10K 5% 1/4W	(CIS)
R119	1-249-429-11	CARBON 10K 5% 1/4W	(CIS)
R121	1-249-434-11	CARBON 27K 5% 1/4W	(CIS)
R122	1-249-441-11	CARBON 100K 5% 1/4W	(CIS)
R201	1-249-441-11	CARBON 100K 5% 1/4W	(AEP, UK, G, IT, EE/N500:AEP2)
R202	1-249-441-11	CARBON 100K 5% 1/4W	(AEP, UK, G, IT, EE/N500:AEP2)
R203	1-249-433-11	CARBON 22K 5% 1/4W	(AEP, UK, G, IT, EE/N500:AEP2)
R204	1-249-426-11	CARBON 5.6K 5% 1/4W	(AEP, UK, G, IT, EE/N500:AEP2)
R205	1-247-807-31	CARBON 100 5% 1/4W	(AEP, UK, G, IT, EE/N500:AEP2)
R206	1-249-421-11	CARBON 2.2K 5% 1/4W	(AEP, UK, G, IT, EE/N500:AEP2)
R301	1-249-417-11	CARBON 1K 5% 1/4W	
R302	1-249-417-11	CARBON 1K 5% 1/4W	
R303	1-249-437-11	CARBON 47K 5% 1/4W	
R304	1-249-416-11	CARBON 820 5% 1/4W	
R305	1-247-897-11	CARBON 560K 5% 1/4W	
R306	1-249-437-11	CARBON 47K 5% 1/4W	
R307	1-249-422-11	CARBON 2.7K 5% 1/4W	(N500)
R307	1-249-409-11	CARBON 220 5% 1/4W	(N600)
R308	1-249-427-11	CARBON 6.8K 5% 1/4W	(N500)
R308	1-249-441-11	CARBON 100K 5% 1/4W	(N600)
R309	1-249-409-11	CARBON 220 5% 1/4W	
R310	1-249-425-11	CARBON 4.7K 5% 1/4W	(N500)
R310	1-249-417-11	CARBON 1K 5% 1/4W	(N600)
R311	1-249-431-11	CARBON 15K 5% 1/4W	(N500)
R311	1-249-441-11	CARBON 100K 5% 1/4W	(N600)
R312	1-249-417-11	CARBON 1K 5% 1/4W	
R313	1-249-417-11	CARBON 1K 5% 1/4W	
R314	1-249-417-11	CARBON 1K 5% 1/4W	
R315	1-247-807-31	CARBON 100 5% 1/4W	
R316	1-249-417-11	CARBON 1K 5% 1/4W	
R317	1-249-417-11	CARBON 1K 5% 1/4W	
R318	1-249-419-11	CARBON 1.5K 5% 1/4W	
R319	1-249-417-11	CARBON 1K 5% 1/4W	
R320	1-249-429-11	CARBON 10K 5% 1/4W	
R321	1-249-429-11	CARBON 10K 5% 1/4W	
R322	1-249-429-11	CARBON 10K 5% 1/4W	
R323	1-249-429-11	CARBON 10K 5% 1/4W	
R324	1-249-423-11	CARBON 3.3K 5% 1/4W	(N500)
R324	1-249-431-11	CARBON 15K 5% 1/4W	(N600)
R327	1-249-417-11	CARBON 1K 5% 1/4W	(EXCEPT CIS)
R328	1-249-429-11	CARBON 10K 5% 1/4W	
R329	1-249-429-11	CARBON 10K 5% 1/4W	
R342	1-249-441-11	CARBON 100K 5% 1/4W	
R343	1-249-441-11	CARBON 100K 5% 1/4W	
R345	1-247-807-31	CARBON 100 5% 1/4W	
R346	1-247-807-31	CARBON 100 5% 1/4W	
R351	1-249-417-11	CARBON 1K 5% 1/4W	
R352	1-249-417-11	CARBON 1K 5% 1/4W	
R353	1-249-437-11	CARBON 47K 5% 1/4W	
R354	1-249-416-11	CARBON 820 5% 1/4W	
R355	1-247-897-11	CARBON 560K 5% 1/4W	
R356	1-249-437-11	CARBON 47K 5% 1/4W	
R357	1-249-422-11	CARBON 2.7K 5% 1/4W	(N500)
R357	1-249-409-11	CARBON 220 5% 1/4W	(N600)
R358	1-249-427-11	CARBON 6.8K 5% 1/4W	(N500)
R358	1-249-441-11	CARBON 100K 5% 1/4W	(N600)
R359	1-249-409-11	CARBON 220 5% 1/4W	
R360	1-249-425-11	CARBON 4.7K 5% 1/4W	(N500)
R360	1-249-417-11	CARBON 1K 5% 1/4W	(N600)
R361	1-249-431-11	CARBON 15K 5% 1/4W	(N500)

Ref. No.	Part No.	Description				Remark
R361	1-249-441-11	CARBON	100K	5%	1/4W	(N600)
R364	1-249-417-11	CARBON	1K	5%	1/4W	
R366	1-249-417-11	CARBON	1K	5%	1/4W	
R367	1-249-417-11	CARBON	1K	5%	1/4W	
R368	1-249-419-11	CARBON	1.5K	5%	1/4W	
R369	1-249-417-11	CARBON	1K	5%	1/4W	
R370	1-249-441-11	CARBON	100K	5%	1/4W	
R371	1-247-883-00	CARBON	150K	5%	1/4W	
R374	1-249-423-11	CARBON	3.3K	5%	1/4W	(N500)
R374	1-249-431-11	CARBON	15K	5%	1/4W	(N600)
R382	1-249-401-11	CARBON	47	5%	1/4W	(N600)
R383	1-249-401-11	CARBON	47	5%	1/4W	(N600)
R501	1-249-417-11	CARBON	1K	5%	1/4W	
R502	1-249-417-11	CARBON	1K	5%	1/4W	
R503	1-249-417-11	CARBON	1K	5%	1/4W	
R504	1-249-441-11	CARBON	100K	5%	1/4W	(N500)
R504	1-249-433-11	CARBON	22K	5%	1/4W	(N600)
R505	1-249-426-11	CARBON	5.6K	5%	1/4W	
R506	1-249-441-11	CARBON	100K	5%	1/4W	
R510	1-249-417-11	CARBON	1K	5%	1/4W	(N500)
R510	1-249-423-11	CARBON	3.3K	5%	1/4W	(N600)
R554	1-249-441-11	CARBON	100K	5%	1/4W	(N500)
R554	1-249-433-11	CARBON	22K	5%	1/4W	(N600)
R555	1-249-426-11	CARBON	5.6K	5%	1/4W	
R556	1-249-417-11	CARBON	1K	5%	1/4W	
R557	1-247-887-00	CARBON	220K	5%	1/4W	
R558	1-249-417-11	CARBON	1K	5%	1/4W	
R559	1-247-887-00	CARBON	220K	5%	1/4W	
R560	1-249-417-11	CARBON	1K	5%	1/4W	(N500)
R560	1-249-423-11	CARBON	3.3K	5%	1/4W	(N600)
R801	1-249-441-11	CARBON	100K	5%	1/4W	
R805	1-249-421-11	CARBON	2.2K	5%	1/4W	
⚠R806	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R807	1-260-070-11	CARBON	3.3	5%	1/2W	
R808	1-215-871-11	METAL OXIDE	2.2K	5%	1W	
R810	1-249-429-11	CARBON	10K	5%	1/4W	
R811	1-249-429-11	CARBON	10K	5%	1/4W	
R812	1-249-429-11	CARBON	10K	5%	1/4W	(N600)
R813	1-249-429-11	CARBON	10K	5%	1/4W	(N600)
R814	1-249-429-11	CARBON	10K	5%	1/4W	
R815	1-249-429-11	CARBON	10K	5%	1/4W	
R816	1-249-441-11	CARBON	100K	5%	1/4W	
R819	1-249-429-11	CARBON	10K	5%	1/4W	(N500)
R820	1-249-417-11	CARBON	1K	5%	1/4W	
R821	1-249-417-11	CARBON	1K	5%	1/4W	
R822	1-249-417-11	CARBON	1K	5%	1/4W	
R823	1-249-417-11	CARBON	1K	5%	1/4W	
R824	1-249-417-11	CARBON	1K	5%	1/4W	
R828	1-249-423-11	CARBON	3.3K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
⚠R842	1-212-873-11	FUSIBLE	47	5%	1/4W	F
⚠R843	1-212-873-11	FUSIBLE	47	5%	1/4W	F (N600)
R844	1-249-429-11	CARBON	10K	5%	1/4W	
R851	1-249-416-11	CARBON	820	5%	1/4W	
R852	1-249-429-11	CARBON	10K	5%	1/4W	
R853	1-249-441-11	CARBON	100K	5%	1/4W	
R854	1-249-417-11	CARBON	1K	5%	1/4W	
R855	1-249-429-11	CARBON	10K	5%	1/4W	
R856	1-249-441-11	CARBON	100K	5%	1/4W	
R857	1-249-417-11	CARBON	1K	5%	1/4W	
R858	1-249-430-11	CARBON	12K	5%	1/4W	
R859	1-249-441-11	CARBON	100K	5%	1/4W	
R860	1-249-429-11	CARBON	10K	5%	1/4W	
R861	1-249-441-11	CARBON	100K	5%	1/4W	
R862	1-249-423-11	CARBON	3.3K	5%	1/4W	
R863	1-249-423-11	CARBON	3.3K	5%	1/4W	
R864	1-249-429-11	CARBON	10K	5%	1/4W	
R865	1-249-429-11	CARBON	10K	5%	1/4W	
R866	1-249-417-11	CARBON	1K	5%	1/4W	
R867	1-249-417-11	CARBON	1K	5%	1/4W	
R869	1-249-429-11	CARBON	10K	5%	1/4W	(N500)
R871	1-249-433-11	CARBON	22K	5%	1/4W	
R872	1-249-433-11	CARBON	22K	5%	1/4W	
R873	1-249-441-11	CARBON	100K	5%	1/4W	
R874	1-247-807-31	CARBON	100	5%	1/4W	
R875	1-249-435-11	CARBON	33K	5%	1/4W	
R876	1-249-417-11	CARBON	1K	5%	1/4W	
R878	1-249-423-11	CARBON	3.3K	5%	1/4W	
R890	1-249-423-11	CARBON	3.3K	5%	1/4W	(N500)
R890	1-249-425-11	CARBON	4.7K	5%	1/4W	(N600)
R891	1-249-423-11	CARBON	3.3K	5%	1/4W	(N500)
R891	1-249-425-11	CARBON	4.7K	5%	1/4W	(N600)
R893	1-249-423-11	CARBON	3.3K	5%	1/4W	(N500)
R893	1-249-417-11	CARBON	1K	5%	1/4W	(N600)
R894	1-249-423-11	CARBON	3.3K	5%	1/4W	(N500)
R894	1-249-417-11	CARBON	1K	5%	1/4W	(N600)

< COMPOSITION CIRCUIT BLOCK >

Ref. No.	Part No.	Description	Remark
RB1	1-239-876-11	ENCAPSULATED COMPONENT	(AEP, UK, EE, CIS/N500:AEP2)
RB1	1-239-260-11	ENCAPSULATED COMPONENT	(G, IT, E, AUS/N500:MX, AR, PX)
RB2	1-236-463-11	ENCAPSULATED COMPONENT	(AEP, UK, EE, CIS/N500:AEP2)

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV1	1-238-601-11	RES, ADJ, CARBON 22K	
RV2	1-238-601-11	RES, ADJ, CARBON 22K	
RV101	1-238-601-11	RES, ADJ, CARBON 22K	(CIS)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

MAIN PANEL

Ref. No.	Part No.	Description	Remark
RV102	1-238-599-11	RES, ADJ, CARBON 4.7K(CIS)	
		< RELAY >	
RY801	1-755-067-11	RELAY	
		< TERMINAL >	
TM1	1-537-488-11	TERMINAL BOARD (ANT)	(AEP, UK, G, IT, EE, CIS/N500:AEP2)
TM1	1-537-238-21	TERMINAL BOARD	(E, AUS/N500:MX, AR, PX)
		< TEST PIN >	
* TP101	1-560-061-00	PIN, CONNECTOR 3P (CIS)	
* TP102	1-560-061-00	PIN, CONNECTOR 3P (CIS)	
		< VIBRATOR >	
X201	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz)	(AEP, UK, G, IT, EE/N500:AEP2)
		< VIBRATOR >	
XT51	1-760-549-11	VIBRATOR, CRYSTAL (4.5MHz)	
**			
*	A-4377-261-A	PANEL BOARD, COMPLETE (N500:AEP, AEP2, UK)	
*	A-4377-824-A	PANEL BOARD, COMPLETE (N500:AUS, PX)	
*	A-4377-827-A	PANEL BOARD, COMPLETE (N500:EE)	
*	A-4377-833-A	PANEL BOARD, COMPLETE (N500:E, MX, AR)	
*	A-4377-835-A	PANEL BOARD, COMPLETE (N500:CIS)	
*	A-4377-919-A	PANEL BOARD, COMPLETE (N500:G, IT)	
*	A-4377-832-A	PANEL BOARD, COMPLETE (N600:AEP, UK)	
*	A-4378-423-A	PANEL BOARD, COMPLETE (N600:AUS)	
*	A-4377-818-A	PANEL BOARD, COMPLETE (N600:EE)	
*	A-4378-420-A	PANEL BOARD, COMPLETE (N600:E)	
*	A-4377-820-A	PANEL BOARD, COMPLETE (N600:CIS)	
*	A-4377-928-A	PANEL BOARD, COMPLETE (N600:G, IT)	
		********************************	
*	4-949-935-01	CUSHION (FL)	
*	4-969-714-01	HOLDER, FL TUBE	
		< CAPACITOR >	
C701	1-124-589-11	ELECT 47uF 20%	16V
C702	1-161-494-00	CERAMIC 0.022uF	25V
C703	1-161-494-00	CERAMIC 0.022uF	25V
C704	1-126-245-11	ELECT 330uF 20%	6.3V
C705	1-126-245-11	ELECT 330uF 20%	6.3V
C706	1-164-159-11	CERAMIC 0.1uF	50V
C707	1-164-159-11	CERAMIC 0.1uF	50V
C708	1-164-159-11	CERAMIC 0.1uF	50V
C709	1-162-286-21	CERAMIC 220PF 10%	50V
C710	1-162-286-21	CERAMIC 220PF 10%	50V
C711	1-162-286-21	CERAMIC 220PF 10%	50V
C712	1-162-286-21	CERAMIC 220PF 10%	50V
C713	1-162-286-21	CERAMIC 220PF 10%	50V
C714	1-162-286-21	CERAMIC 220PF 10%	50V
C715	1-162-286-21	CERAMIC 220PF 10%	50V
C716	1-162-286-21	CERAMIC 220PF 10%	50V
C717	1-162-286-21	CERAMIC 220PF 10%	50V
C718	1-162-286-21	CERAMIC 220PF 10%	50V
C719	1-162-286-21	CERAMIC 220PF 10%	50V
C720	1-162-286-21	CERAMIC 220PF 10%	50V
C721	1-162-286-21	CERAMIC 220PF 10%	50V
C722	1-162-286-21	CERAMIC 220PF 10%	50V
C723	1-162-286-21	CERAMIC 220PF 10%	50V
C724	1-162-286-21	CERAMIC 220PF 10%	50V
C725	1-162-286-21	CERAMIC 220PF 10%	50V
C726	1-162-286-21	CERAMIC 220PF 10%	50V
C727	1-162-286-21	CERAMIC 220PF 10%	50V
C728	1-162-286-21	CERAMIC 220PF 10%	50V
C729	1-162-286-21	CERAMIC 220PF 10%	50V
C730	1-162-286-21	CERAMIC 220PF 10%	50V
C731	1-162-286-21	CERAMIC 220PF 10%	50V
C732	1-162-286-21	CERAMIC 220PF 10%	50V
C733	1-162-286-21	CERAMIC 220PF 10%	50V
C734	1-162-286-21	CERAMIC 220PF 10%	50V
C735	1-162-286-21	CERAMIC 220PF 10%	50V
C736	1-162-286-21	CERAMIC 220PF 10%	50V
C737	1-162-286-21	CERAMIC 220PF 10%	50V
C738	1-162-286-21	CERAMIC 220PF 10%	50V
C739	1-162-286-21	CERAMIC 220PF 10%	50V
C740	1-162-286-21	CERAMIC 220PF 10%	50V
C741	1-162-286-21	CERAMIC 220PF 10%	50V
C742	1-162-286-21	CERAMIC 220PF 10%	50V
C743	1-162-306-11	CERAMIC 0.01uF 30%	16V
C744	1-162-215-31	CERAMIC 47PF 5%	50V
C745	1-162-294-31	CERAMIC 0.001uF 10%	50V
C746	1-162-294-31	CERAMIC 0.001uF 10%	50V
C747	1-162-294-31	CERAMIC 0.001uF 10%	50V
C748	1-126-177-11	ELECT 100uF 20%	10V
C749	1-162-286-21	CERAMIC 220PF 10%	50V
C750	1-102-948-00	CERAMIC 11PF 5%	50V
C751	1-102-948-00	CERAMIC 11PF 5%	50V
C752	1-126-301-11	ELECT 1uF 20%	50V
C753	1-126-301-11	ELECT 1uF 20%	50V
C754	1-124-261-00	ELECT 10uF 20%	50V
C756	1-161-494-00	CERAMIC 0.022uF	25V

PANEL

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN701	1-568-858-11	SOCKET, CONNECTOR 15P	
* CN702	1-568-858-11	SOCKET, CONNECTOR 15P	
* CN703	1-568-852-11	SOCKET, CONNECTOR 9P	(AEP, UK, G, IT, EE/N500:AEP2)
* CN703	1-568-850-11	SOCKET, CONNECTOR 7P	(CIS, E, AUS/N500:MX, AR, PX)

< DIODE >

Ref. No.	Part No.	Description	Remark
D701	8-719-987-63	DIODE 1N4148M	
D702	8-719-987-63	DIODE 1N4148M	
D703	8-719-987-63	DIODE 1N4148M	
D704	8-719-987-63	DIODE 1N4148M	(AEP, UK, EE, AUS/N500:AEP2, PX)
D705	8-719-987-63	DIODE 1N4148M	(G, IT, EE, E, AUS/N500:MX, AR, PX)
D706	8-719-987-63	DIODE 1N4148M	(CIS, E, AUS/N500:MX, AR, PX)
D707	8-719-987-63	DIODE 1N4148M	(N600/N500:CIS)
D708	8-719-987-63	DIODE 1N4148M	

< FILTER >

Ref. No.	Part No.	Description	Remark
FL701	1-517-380-11	INDICATOR TUBE, FLUORESCENT	

< IC >

Ref. No.	Part No.	Description	Remark
IC701	8-759-327-88	IC uPD78044AGF-068-3B9	
IC702	8-741-810-59	IC SBX1810-59	

< COIL >

Ref. No.	Part No.	Description	Remark
L701	1-410-521-11	INDUCTOR 100uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-900-36	TRANSISTOR DTC124ES	
Q704	8-729-900-36	TRANSISTOR DTC124ES	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R701	1-247-807-31	CARBON 100 5% 1/4W	
R702	1-247-807-31	CARBON 100 5% 1/4W	
R703	1-247-807-31	CARBON 100 5% 1/4W	
R704	1-247-807-31	CARBON 100 5% 1/4W	
R709	1-249-417-11	CARBON 1K 5% 1/4W	
R710	1-249-417-11	CARBON 1K 5% 1/4W	
R711	1-249-433-11	CARBON 22K 5% 1/4W	
R712	1-249-433-11	CARBON 22K 5% 1/4W	
R713	1-249-429-11	CARBON 10K 5% 1/4W	
R714	1-249-429-11	CARBON 10K 5% 1/4W	
R715	1-249-425-11	CARBON 4.7K 5% 1/4W	
R716	1-249-429-11	CARBON 10K 5% 1/4W	
R717	1-249-393-11	CARBON 10 5% 1/4W	
R718	1-249-423-11	CARBON 3.3K 5% 1/4W	
R719	1-247-807-31	CARBON 100 5% 1/4W	
R720	1-249-407-11	CARBON 150 5% 1/4W	
R721	1-249-409-11	CARBON 220 5% 1/4W	
R722	1-249-411-11	CARBON 330 5% 1/4W	
R723	1-249-413-11	CARBON 470 5% 1/4W	
R724	1-249-415-11	CARBON 680 5% 1/4W	
R725	1-249-417-11	CARBON 1K 5% 1/4W	
R726	1-249-419-11	CARBON 1.5K 5% 1/4W	
R727	1-249-421-11	CARBON 2.2K 5% 1/4W	
R728	1-249-423-11	CARBON 3.3K 5% 1/4W	
R729	1-249-425-11	CARBON 4.7K 5% 1/4W	
R730	1-249-429-11	CARBON 10K 5% 1/4W	
R731	1-249-433-11	CARBON 22K 5% 1/4W	
R732	1-249-423-11	CARBON 3.3K 5% 1/4W	
R733	1-247-807-31	CARBON 100 5% 1/4W	
R734	1-249-407-11	CARBON 150 5% 1/4W	
R735	1-249-409-11	CARBON 220 5% 1/4W	
R736	1-249-411-11	CARBON 330 5% 1/4W	
R737	1-249-413-11	CARBON 470 5% 1/4W	
R738	1-249-415-11	CARBON 680 5% 1/4W	
R739	1-249-417-11	CARBON 1K 5% 1/4W	
R740	1-249-419-11	CARBON 1.5K 5% 1/4W	
R741	1-249-421-11	CARBON 2.2K 5% 1/4W	
R742	1-249-423-11	CARBON 3.3K 5% 1/4W	
R746	1-249-417-11	CARBON 1K 5% 1/4W	
R747	1-249-423-11	CARBON 3.3K 5% 1/4W	
R748	1-249-441-11	CARBON 100K 5% 1/4W	
R749	1-249-441-11	CARBON 100K 5% 1/4W	
R750	1-249-441-11	CARBON 100K 5% 1/4W	
R751	1-249-441-11	CARBON 100K 5% 1/4W	
R752	1-249-441-11	CARBON 100K 5% 1/4W	
R753	1-249-441-11	CARBON 100K 5% 1/4W	
R754	1-249-441-11	CARBON 100K 5% 1/4W	
R755	1-249-441-11	CARBON 100K 5% 1/4W	
R756	1-249-441-11	CARBON 100K 5% 1/4W	
R757	1-249-441-11	CARBON 100K 5% 1/4W	
R758	1-249-441-11	CARBON 100K 5% 1/4W	
R759	1-249-441-11	CARBON 100K 5% 1/4W	
R761	1-249-417-11	CARBON 1K 5% 1/4W	
R762	1-249-421-11	CARBON 2.2K 5% 1/4W	
R763	1-249-417-11	CARBON 1K 5% 1/4W	
R764	1-249-417-11	CARBON 1K 5% 1/4W	
R765	1-249-417-11	CARBON 1K 5% 1/4W	
R766	1-249-429-11	CARBON 10K 5% 1/4W	
R767	1-249-429-11	CARBON 10K 5% 1/4W	

PANEL

Ref.No.	Part No.	Description	Remark
R768	1-249-429-11	CARBON 10K 5% 1/4W	
R769	1-249-441-11	CARBON 100K 5% 1/4W	
R770	1-247-887-00	CARBON 220K 5% 1/4W (UK, EE, CIS, E, AUS/N500:AEP2, MX, AR, PX)	
		< COMPOSITION CIRCUIT BLOCK >	
RB701	1-232-967-11	COMPOSITION CIRCUIT BLOCK	
		< SWITCH >	
S701	1-554-303-21	SWITCH, TACTILE (DANCE/5)	
S702	1-554-303-21	SWITCH, TACTILE (EQ MEMORY)	
S703	1-554-303-21	SWITCH, TACTILE (CHARACTER)	
S704	1-554-303-21	SWITCH, TACTILE (ENTER/NEXT)	
S705	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▽)	
S706	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ◁)	
S707	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL △)	
S708	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▷)	
S709	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S710	1-554-303-21	SWITCH, TACTILE (TUNING -)	
S711	1-554-303-21	SWITCH, TACTILE (TUNING MODE)	
S712	1-554-303-21	SWITCH, TACTILE (TUNING MEMORY)	
S713	1-554-303-21	SWITCH, TACTILE (TUNING +)	
S714	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)	
S715	1-554-303-21	SWITCH, TACTILE (CLASSIC/4)	
S716	1-554-303-21	SWITCH, TACTILE (JAZZ/3)	
S717	1-554-303-21	SWITCH, TACTILE (POPS/2)	
S718	1-554-303-21	SWITCH, TACTILE (ROCK/1)	
S719	1-554-303-21	SWITCH, TACTILE (P·FILE)	
S720	1-554-303-21	SWITCH, TACTILE (TIMER SET)	
S721	1-554-303-21	SWITCH, TACTILE (CLOCK SET)	
S722	1-554-303-21	SWITCH, TACTILE (DAILY)	
S723	1-554-303-21	SWITCH, TACTILE (REC)	
S724	1-554-303-21	SWITCH, TACTILE (EON) (AEP, UK, G, IT, EE/N500:AEP2)	
S725	1-554-303-21	SWITCH, TACTILE (PTY) (AEP, UK, G, IT, EE/N500:AEP2)	
		< VIBRATOR >	
X701	1-760-096-11	VIBRATOR, CRYSTAL (4.19MHz)	

****

MISCELLANEOUS
****

Ref.No.	Part No.	Description	Remark
3	1-769-544-11	WIRE (FLAT TYPE) (15 CORE)	
5	1-769-546-11	WIRE (FLAT TYPE) (7 CORE) (CIS, E, AUS/N500:MX, AR, PX)	
5	1-769-547-11	WIRE (FLAT TYPE) (9 CORE) (AEP, UK, G, IT, EE/N500:AEP2)	
6	1-769-545-11	WIRE (FLAT TYPE) (15 CORE)	

ACCESSORIES & PACKING MATERIALS
****

Ref.No.	Part No.	Description	Remark
*	4-973-307-01	CUSHION (UPPER) (UK, EE, CIS, E, AUS/N500:MX, AR, PX)	
*	4-973-639-01	INDIVIDUAL CARTON(N500:AEP, AEP2, UK, G, IT)	
*	4-973-639-11	INDIVIDUAL CARTON(N600:AEP, UK, G, IT)	
*	4-973-650-01	CUSHION (LOWER) (UK, EE, CIS, E, AUS/N500:MX, AR, PX)	
*	4-973-868-01	CUSHION(AEP, G, IT/N500:AEP2)	

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Home A&V Products Div.
Published by Home A&V Products Div.
Quality Engineering Dept.

TAN-N500/N600

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
TAN-N500/N600
PX Model
TAN-N500

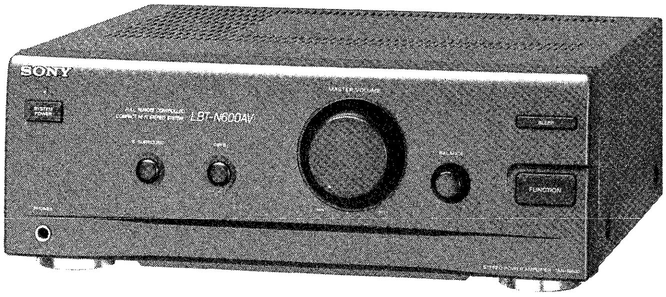

Photo: TAN-N600

TAN-N500/N600 are the Amplifier Section in LBT-N500/N550/550K/550P and LBT-N600AV/N650AV.

SPECIFICATIONS

DIN power output
40 W +40 W (6 ohms, at 1 kHz)

Continuous RMS power output
50 W + 50 W (6 ohms, at 1 kHz, 5% THD)

Music power output
100 W + 100 W (6 ohms, at 1 kHz, 10% THD)

Frequency response
15 Hz to 50 kHz $^{+0}_{-3}$ dB

Power requirements
European models:
220-230 V AC, 50/60 Hz
Australian model:
220-240 V AC, 50/60 Hz
Malaysian model:
220-240 V AC, 50/60 Hz
Mexican model:
120 V AC, 50/60 Hz
Other models:
110-120 V or 220-240 V AC adjustable, 50/60 Hz

Power consumption
European models:
135 W
Other models:
195 W

Output	Jack type	Impedance
SURROUND SPEAKER (N500)	–	Accepts speakers up to 16 ohms
PHONES	Stereophone	Accepts headphones of 8 ohms or more

Weight Approx. 5.4 kg
Dimensions
Approx. 355 x 130 x 335 mm (w/h/d, including projections)

Design and specifications are subject to change without notice.

STEREO POWER AMPLIFIER

SONY®

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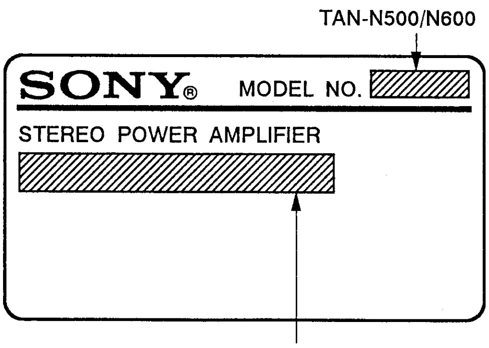
MODEL IDENTIFICATION

– Specification Label Printed on Back Panel –



AEP, German, Italian, East European,
CIS model : AC: 220 V-230 V ~50/60 Hz 135 W
UK model : AC: 220 V-230 V ~50 Hz
Australian,
Malaysia model : AC: 220 V-240 V ~50/60 Hz 195 W
E, Saudi Arabia, Singapore,
PX model : AC: 110 V-120 V/220 V-240 V ~50/60 Hz 195 W
Mexican model : AC: 120 V ~60 Hz 195 W

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

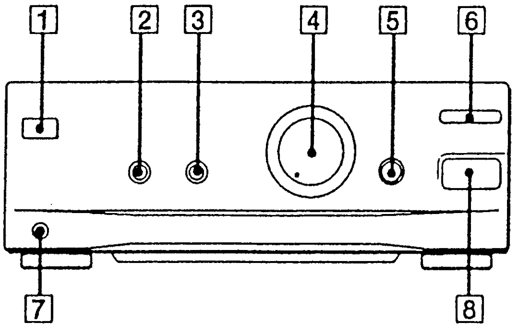
SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. INDEX TO PARTS AND CONTROLS

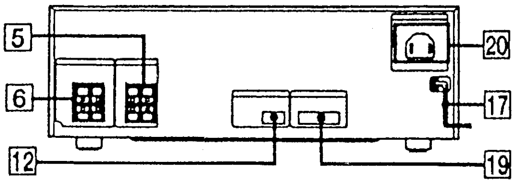
Front Panel

Power Amplifier (TAN-N500/N600)



1 SYSTEM POWER switch
2 SURROUND button (N500)
2 S-SURROUND button (N600)
3 DBFB button
4 VOLUME control (N500)
4 MASTER VOLUME control (N600)
5 BALANCE control
6 SLEEP button
7 PHONES jack
8 FUNCTION button

Rear Panel

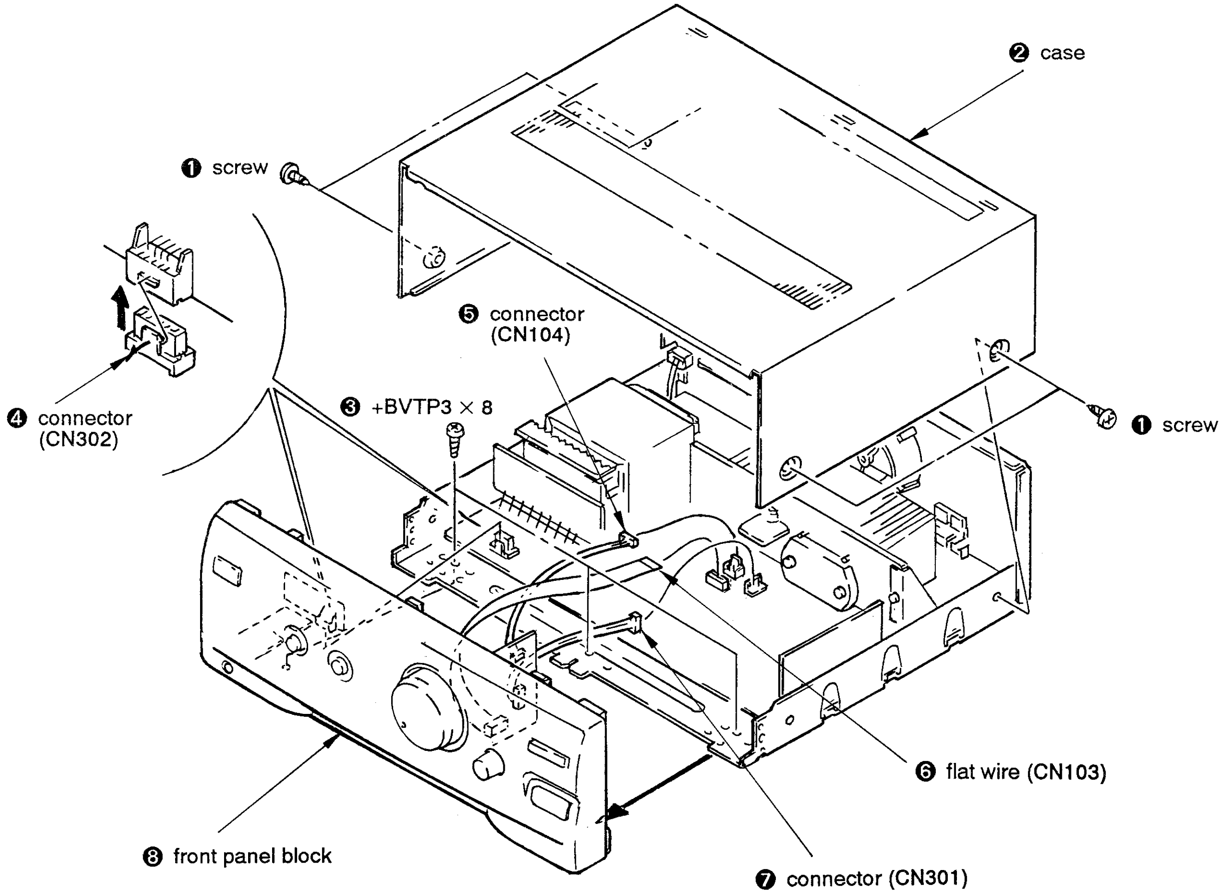


5 SPEAKER connectors
6 SURROUND SPEAKER connectors (N500)
12 SYSTEM CONTROL 4 terminals (N600)
17 AC power cord
19 SYSTEM CONTROL 2 terminals
20 AC OUTLET (N600)

SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

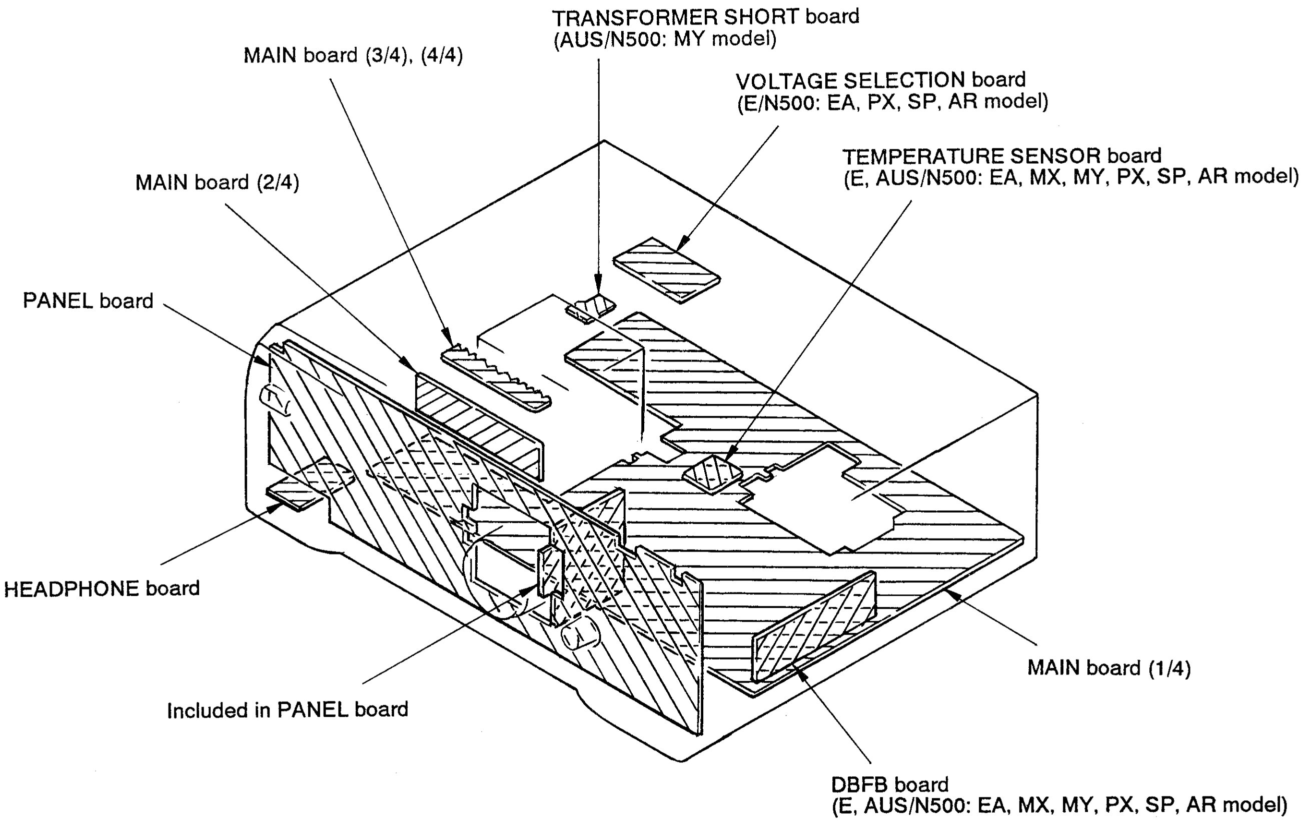
FRONT PANEL ASS'Y



➋ case
➊ screw
➎ connector (CN104)
➍ connector (CN302)
➌ +BVTP3 × 8
➊ screw
➏ flat wire (CN103)
➑ front panel block
➐ connector (CN301)

SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

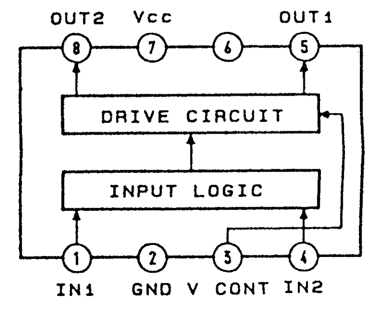

TRANSFORMER SHORT board
(AUS/N500: MY model)
MAIN board (3/4), (4/4)
VOLTAGE SELECTION board
(E/N500: EA, PX, SP, AR model)
TEMPERATURE SENSOR board
(E, AUS/N500: EA, MX, MY, PX, SP, AR model)
MAIN board (2/4)
PANEL board
HEADPHONE board
MAIN board (1/4)
Included in PANEL board
DBFB board
(E, AUS/N500: EA, MX, MY, PX, SP, AR model)

- Abbreviation

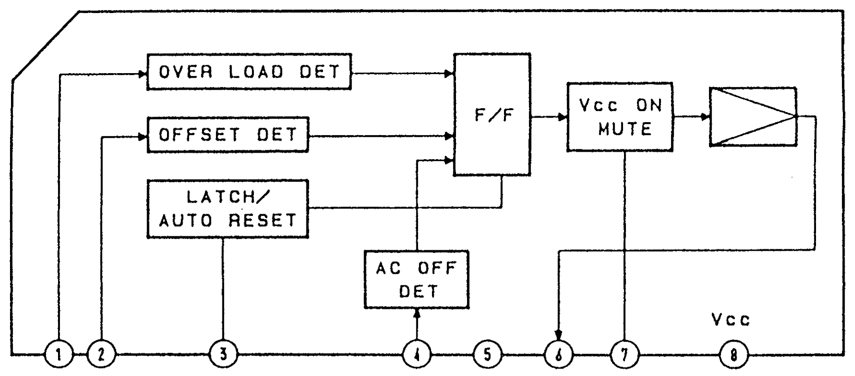
EA	: Saudi Arabia model
MX	: Mexican model
SP	: Singapore model
MY	: Malaysia model
AUS	: Australian model
AR	: Argentine model

- **IC Block Diagrams**

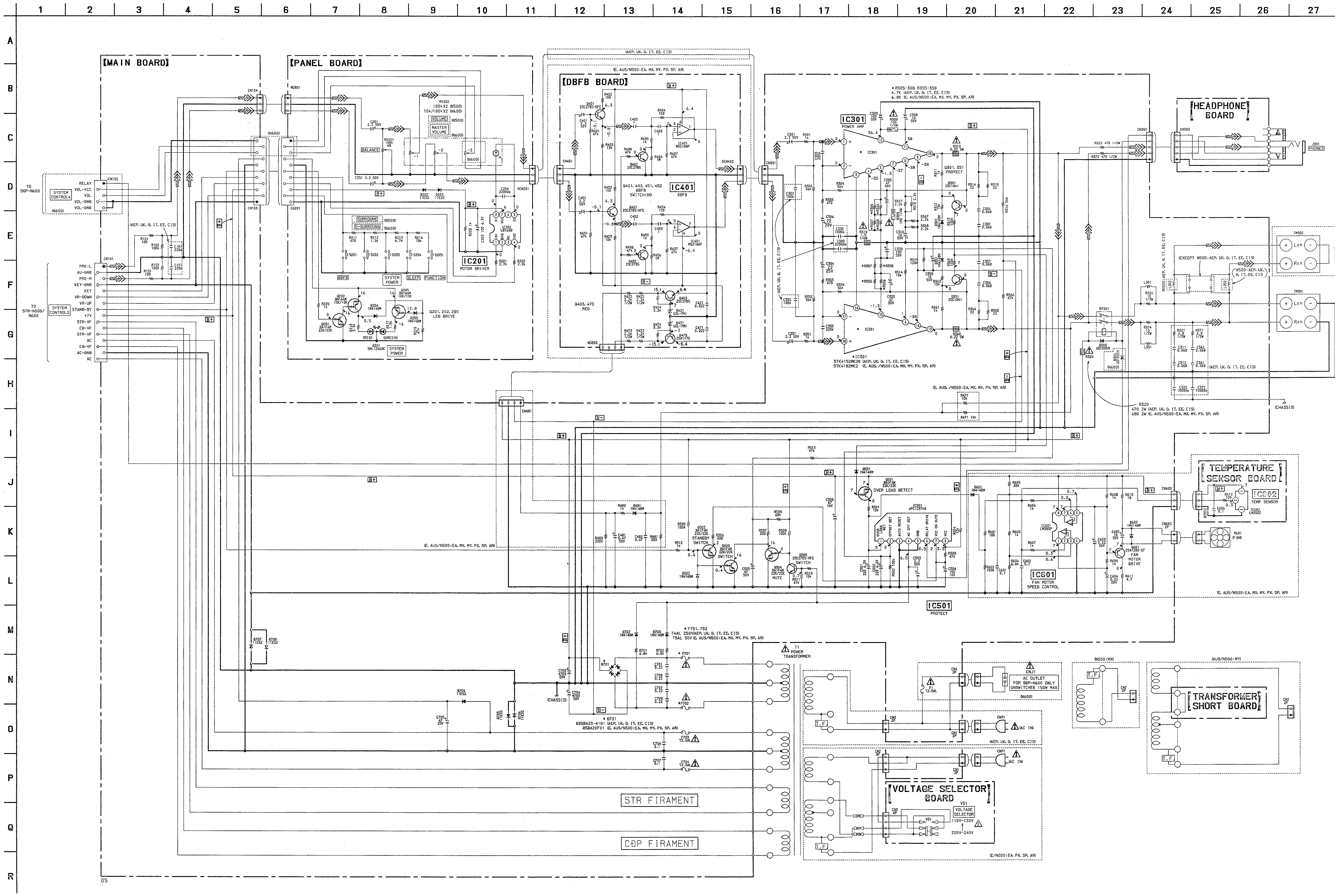
IC201 LB1639


OUT2
Vcc
OUT1
DRIVE CIRCUIT
INPUT LOGIC
IN1
GND
V CONT
IN2
1
2
3
4
5
6
7
8

IC501 µPC1237HA


OVER LOAD DET
OFFSET DET
LATCH/
AUTO RESET
F/F
Vcc ON
MUTE
AC OFF
DET
Vcc
1
2
3
4
5
6
7
8

3-2. SCHEMATIC DIAGRAM


[MAIN BOARD]
[PANEL BOARD]
[DBFB BOARD]
[HEADPHONE] BOARD
[TEMPERATURE SENSOR BOARD]
[TRANSFORMER SHORT BOARD]
[VOLTAGE SELECTOR BOARD]
IC201
MOTOR DRIVER
IC401
DBFB
IC301
POWER AMP
IC501
PROTECT
IC601
FAN MOTOR SPEED CONTROL
IC602
TEMP SENSOR
STR FIRAMENT
CDP FIRAMENT
TO SEP-N600
TO STR-N500/N600
SYSTEM CONTROL
MASTER VOLUME
BALANCE
PHONES
SURROUND SPEAKER IMPEDANCE USE 8-16Ω
SPEAKER IMPEDANCE USE 4-16Ω
T1 POWER TRANSFORMER
AC OUTLET
AC IN
VOLTAGE SELECTOR
110V-120V
220V-240V
STANDBY SWITCH
OVER LOAD DETECT
FAN MOTOR DRIVE
RELAY
(CHASSIS)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
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17
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R

NOTE

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ :internal component.
- :nonflammable resistor.
- :fusible resistor.
- ☐ :panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ :B+ Line.
- B− :B- Line.
- Voltages are dc with respect to ground under no-signal conditions.
  no mark:PHONO
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Abbreviation
  N500:TAN-N500
  N600:TAN-N600
  G :German model.
  IT :Italian model.
  EE :East European model.
  EA :Saudi Arabia model.
  AR :Argentine model.
  AUS:Australian model.
  SP :Singapore model.
  MY :Malaysia model.
  MX :Mexican model.
- Signal path.
  ⇨ :PHONO

3-3. PRINTED WIRING BOARDS

- **Semiconductor Location**

Ref. No.	Location
D201	J-1
D202	H-8
D203	H-8
D204	I-3
D205	I-2
D301	G-20
D303	G-16
△ D304	B-22
D351	G-18
○ D421	C-9
○ D471	C-9
○ D481	H-18
○ D501	H-18
D502	J-16
○ D601	J-19
○ D602	B-22
D701	I-23
D702	J-27
D703	J-27
D704	G-23
D705	G-23
D706	H-23
D707	H-22
D708	G-22
IC201	H-7
IC301	F-19
○ IC401	C-9
IC501	H-16
○ IC601	I-19
○ IC602	D-19
Q201	I-3
Q202	I-3
Q205	I-2
Q301	G-20
Q351	G-17
○ Q401	D-8
○ Q402	D-9
○ Q451	B-8
○ Q452	B-9
Q501	I-17
Q502	I-16
Q503	I-16
Q504	I-16
Q505	I-16
○ Q601	I-20

Note:
○ : E, AUS/N500: EA, MX, MY, PX, SP, AR MODEL
△ : N600

Note:
- ○—— : parts extracted from the component side.
- △ : internal component.
- ▨ : Pattern from the side which enables seeing.
- Abbreviations

G	: German model
IT	: Italian model
EA	: Saudi Arabia model
EE	: East European model
MX	: Mexican model
SP	: Singapore model
MY	: Malaysia model
AUS	: Australian model
AR	: Argentine model

A
B
C
D
E
F
G
H
I
J
[HEADPHONE BOARD] (1/2)
[HEADPHONE BOARD] (2/2)
J301
PHONES
TAN-N500/N600: E, AUS/N500: EA, MX, MY, PX, SP, AR MODEL
[DBFB BOARD]
TAN-N500/N600: AEP, UK, G, IT, EE, CIS MODEL
[PANEL BOARD]
S202
SURROUND
TAN-N500
TAN-N600
S201
S205
FUNCTION
S204
SLEEP
S203
SYSTEM POWER
included in PANEL BOARD
1-654-893-
TAN-N500
TM302
SURROUND SPEAKER (IMPEDANCE USE) 6-16Ω
TM301
SPEAKER (IMPEDANCE USE) 6-16Ω
[MAIN BOARD] (1/4)
TAN-N500: AEP, UK, G, IT, EE, CIS MODEL
TAN-N500/N600: AEP, UK, G, IT, EE, CIS MODEL
TAN-N500/N600: E, AUS/N500: EA, MX, MY, PX, SP, AR MODEL
M601
FAN
CN602
[TEMPERATURE SENSOR BOARD]
TAN-N600
CN102
SYSTEM CONTROL 4
CN101
SYSTEM CONTROL 2
TAN-N500: MY, AUS, MX MODEL
TAN-N500/N600: AEP, UK, G, IT, EE, CIS MODEL
TAN-N500/N600: AEP, UK, G, IT, EE, CIS, AUS / N500: MX, MY MODEL
TAN-N500/N600: E/N500: EA, PX, SP, AR MODEL
CN-1
AC OUTLET FOR SDP-N600 ONLY UNSWITCHED 150W MAX
CNP 1
AC
TAN-N500/N600: E/N500: EA, PX, SP, AR MODEL
[VOLTAGE SELECTOR BOARD]
VOLTAGE SELECTOR
110V-120V
220V-240V
T1 POWER TRANSFORMER
RED
BRN
ORG
GRY
BLU
[MAIN BOARD] (4/4)
TAN-N500/N600: AEP, UK, G, IT, EE, CIS MODEL
[MAIN BOARD] (3/4)
[MAIN BOARD] (2/4)
TAN-N500: MX MODEL
TAN-N500/N600: AUS/N500: MY MODEL
[TRANSFORMER SHORT BOARD]
1-656-361-
TAN-N600
TAN-N500/N600: E, AUS/N500: EA, MX, MY, PX, SP, AR MODEL
TAN-N500/N600: E, AUS/ N500: EA, MX, MY, PX, SP, AR MODEL
■NOT REPLACEABLE: BUILT IN TRANSFORMER

SECTION 4
EXPLODED VIEWS

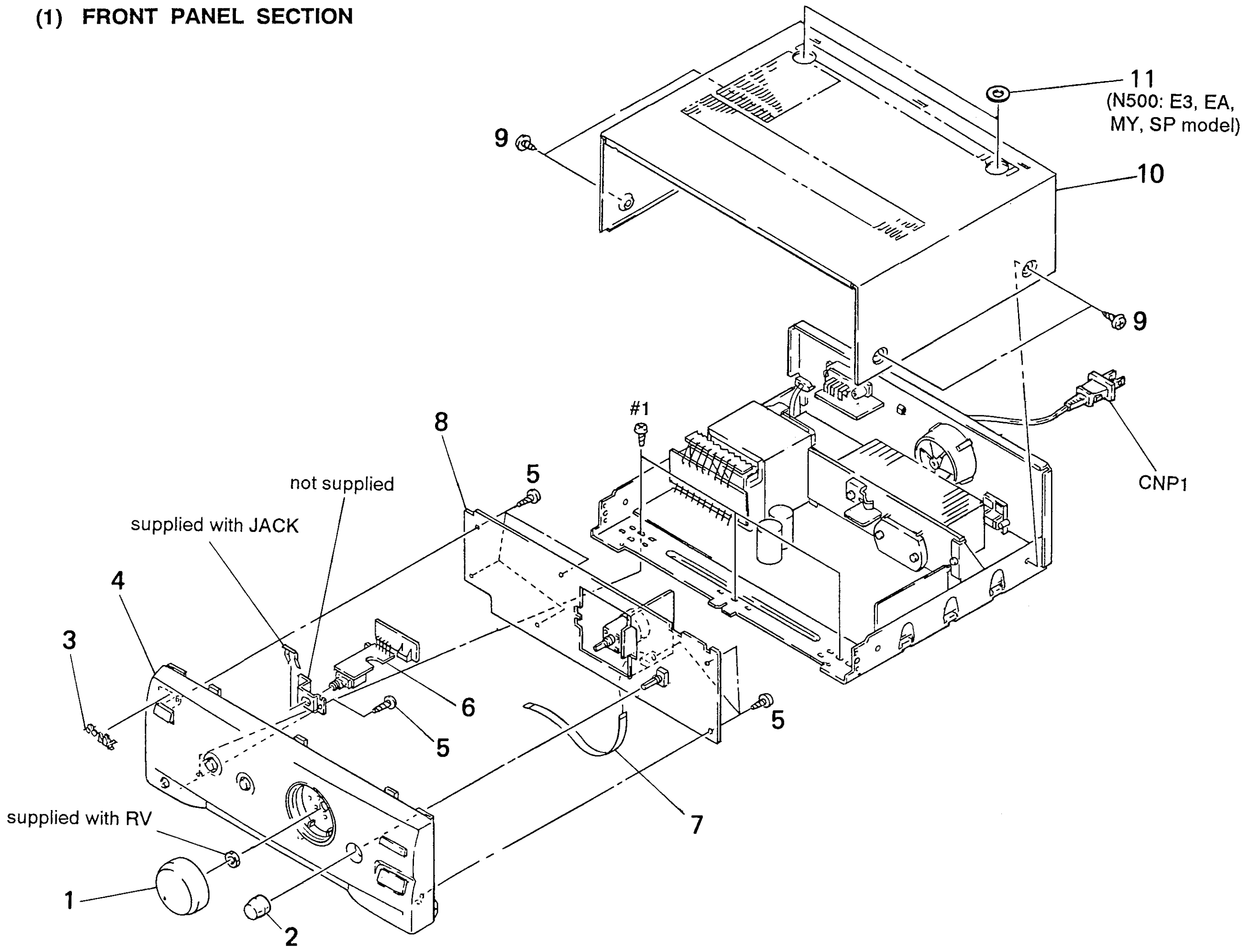
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Items marked "∗" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

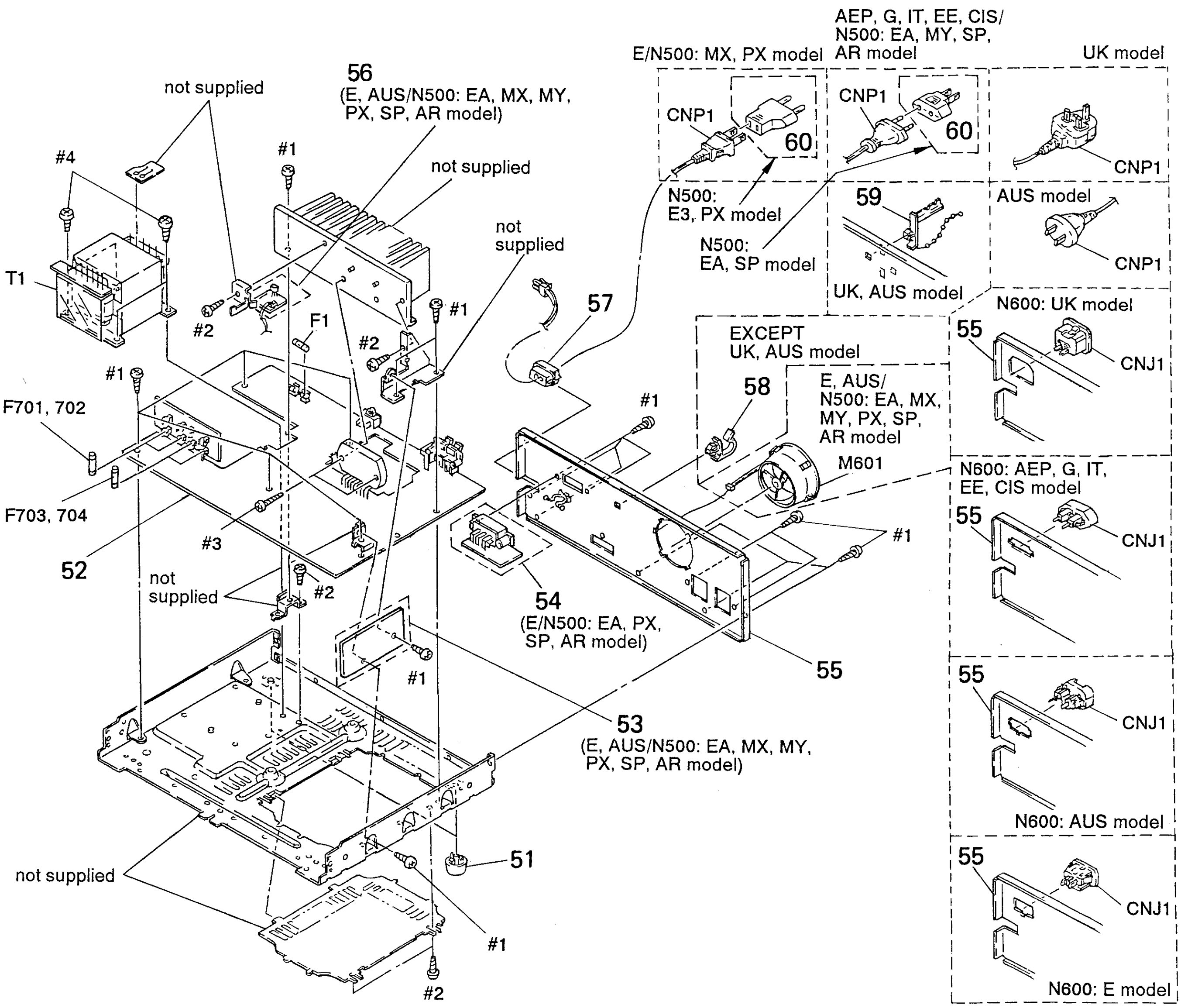
- Abbreviation
  G : German model
  MX : Mexican model
  AR : Argentine model
  IT : Italian model
  SP : Singapore model
  E2 : 120 V AC area
  EA : Saudi Arabia model
  MY : Malaysia model
  E3 : 240 V AC area
  EE : East European model
  AUS : Australian model
  AEP1, G1, IT1, EE1, CIS1 : Model for LBT-N500
  AEP2, UK2, G2, IT2, CIS2 : Model for LBT-N550

(1) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	4-969-683-11	KNOB (V)	
2	4-962-703-22	KNOB (SUR)	
3	4-963-404-21	EMBLEM (5-A), SONY (EXCEPT N600:AUS, E)	
4	X-4945-603-1	PANEL ASSY, FRONT (N500:AEP1, G1, IT1, EE1, CIS1)	
4	X-4945-604-1	PANEL ASSY, FRONT (N500:E2, MX, PX, AR, AUS, AEP2, UK2, G2, IT2, CIS2)	
4	X-4945-605-1	PANEL ASSY, FRONT (N500:E3, EA, MY, SP)	
4	X-4945-606-1	PANEL ASSY, FRONT (N600:AEP, UK, G, IT, EE, CIS)	
4	X-4946-128-1	PANEL ASSY, FRONT (N600:E, AUS)	
5	4-951-620-01	SCREW (2.6X8), +BVTP	
∗ 6	1-654-890-11	HEADPHONE BOARD	
7	1-590-218-11	WIRE, FLAT TYPE (11 CORE) (N600)	
∗ 7	1-590-240-11	WIRE, FLAT TYPE (9 CORE) (N500)	
7	1-590-240-31	WIRE, FLAT TYPE (9 CORE) (N500)	
∗ 8	A-4377-249-A	PANEL BOARD, COMPLETE (N600)	
∗ 8	A-4377-273-A	PANEL BOARD, COMPLETE (N500:AEP, UK, G, IT, EE, CIS)	
∗ 8	A-4377-331-A	PANEL BOARD, COMPLETE (N500:E, EA, MX, MY, PX, SP, AR, AUS)	
9	3-363-099-01	SCREW (CASE 3 TP2)	
10	4-969-778-11	CASE (N600)	
∗ 10	4-969-778-51	CASE (N500)	
11	4-975-837-01	STOPPER (N500:E3, EA, MY, SP)	

(2) CHASSIS SECTION



AEP, G, IT, EE, CIS/
N500: EA, MY, SP,
AR model
E/N500: MX, PX model
UK model
56
(E, AUS/N500: EA, MX, MY,
PX, SP, AR model)
not supplied
CNP1
60
CNP1
60
CNP1
#4
#1
not supplied
N500:
E3, PX model
59
AUS model
not
supplied
N500:
EA, SP model
CNP1
T1
UK, AUS model
57
N600: UK model
#2
F1
#1
EXCEPT
UK, AUS model
55
#2
CNJ1
#1
58
E, AUS/
N500: EA, MX,
MY, PX, SP,
AR model
F701, 702
#1
M601
N600: AEP, G, IT,
EE, CIS model
F703, 704
55
CNJ1
#3
#1
52
not
supplied
#2
54
(E/N500: EA, PX,
SP, AR model)
55
#1
55
CNJ1
53
(E, AUS/N500: EA, MX, MY,
PX, SP, AR model)
N600: AUS model
55
51
not supplied
CNJ1
#1
N600: E model
#2

Ref. No.	Part No.	Description	Remark
51	X-4941-228-1	FOOT ASSY	
* 52	A-4377-248-A	MAIN BOARD, COMPLETE	(N600:AEP, UK, G, IT, EE, CIS)
* 52	A-4377-271-A	MAIN BOARD, COMPLETE	(N500:AEP, UK, G, IT, EE, CIS)
* 52	A-4377-274-A	MAIN BOARD, COMPLETE	(N500:E, EA, PX, SP, AR)
* 52	A-4377-816-A	MAIN BOARD, COMPLETE	(N500:MX, MY, AUS)
* 52	A-4378-418-A	MAIN BOARD, COMPLETE	(N600:AUS)
* 52	A-4378-419-A	MAIN BOARD, COMPLETE	(N600:E)
* 53	A-4378-331-A	DBFB BOARD, COMPLETE	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
* 54	1-654-891-11	VOLTAGE SELECTION BOARD	(E/N500:EA, PX, SP, AR)
* 55	4-969-785-01	PANEL, BACK	(N500:AEP, IT)
* 55	4-969-785-11	PANEL, BACK	(N500:G)
* 55	4-969-785-21	PANEL, BACK	(N500:UK)
* 55	4-969-785-31	PANEL, BACK	(N500:EE, CIS)
* 55	4-970-164-01	PANEL, BACK	(N500:E, AR)
* 55	4-970-164-12	PANEL, BACK	(N500:MY)
* 55	4-970-164-21	PANEL, BACK	(N500:SP)
* 55	4-970-164-31	PANEL, BACK	(N500:MX)
* 55	4-970-164-41	PANEL, BACK	(N500:AUS)
* 55	4-970-164-51	PANEL, BACK	(N500:EA, PX)
* 55	4-970-164-61	PANEL, BACK	(N600:E)
* 55	4-970-164-71	PANEL, BACK	(N600:AUS)
* 55	4-971-710-01	PANEL, BACK	(N600:AEP, IT)
* 55	4-971-710-11	PANEL, BACK	(N600:G)
* 55	4-971-710-21	PANEL, BACK	(N600:UK)
* 55	4-971-710-31	PANEL, BACK	(N600:EE, CIS)
* 56	1-654-892-12	TEMPERATURE SENSOR BOARD	(E, AUS/N500:EA, MX, MY, PX, SP, AR)

Ref. No.	Part No.	Description	Remark
* 57	3-703-244-00	BUSHING (2104), CORD	(AEP, UK, G, IT, EE, CIS, AUS/N500:EA, MY, SP, AR)
57	3-703-571-11	BUSHING (S) (4516), CORD	(E/N500:MX, PX)
* 58	4-949-235-01	HOOK	(AEP, G, IT, EE, CIS, E/N500:EA, MX, MY, PX, SP, AR)
59	4-956-370-12	BAND, PLUG FIXED	(UK, AUS)
⚠60	1-569-007-11	ADAPTER, CONVERSION 2P	(N500:E3, PX)
⚠60	1-569-008-11	ADAPTER, CONVERSION 2P	(N500:EA, SP)
⚠CNJ1	1-526-751-12	OUTLET, AC	(N600:UK)
⚠CNJ1	1-526-794-11	OUTLET, AC	(N600:AEP, G, IT, EE, CIS)
⚠CNJ1	1-526-882-00	OUTLET, AC	(N600:E)
⚠CNJ1	1-540-196-11	OUTLET, AC	(N600:AUS)
⚠CNP1	1-558-943-41	CORD, POWER	(E/N500:MX, PX)
⚠CNP1	1-575-651-21	CORD, POWER	(AEP, G, IT, EE, CIS/N500:EA, MY, SP, AR)
⚠CNP1	1-696-845-11	CORD, POWER	(AUS)
⚠CNP1	1-751-529-11	CORD, POWER	(UK)
⚠F1	1-532-286-00	FUSE (T2.5A 250V)	(N600)
⚠F701	1-532-299-00	FUSE. (T5A 250V)	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
⚠F701	1-532-350-00	FUSE (T4A 250V)	(AEP, UK, G, IT, EE, CIS)
⚠F702	1-532-299-00	FUSE (T5A 250V)	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
⚠F702	1-532-350-00	FUSE (T4A 250V)	(AEP, UK, G, IT, EE, CIS)
⚠F703	1-532-286-00	FUSE (T2.5A 250V)	
⚠F704	1-532-286-00	FUSE (T2.5A 250V)	
M601	X-4942-029-1	CASE ASSY, FAN	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
⚠T1	1-427-773-11	TRANSFORMER, POWER	(AEP, UK, G, IT, EE, CIS)
⚠T1	1-427-774-11	TRANSFORMER, POWER	(E, AUS/N500:EA, MY, PX, SP, AR)
⚠T1	1-427-907-11	TRANSFORMER, POWER	(N500:MX)

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SECTION 5
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA ..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH
- Abbreviation G : Geraman IT : Italian EA : Saudi Arabia EE : East European MX : Mexican
  SP : Singapore MY : Malaysia AUS : Australian AR : Argentine E3 : 240V AC area

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
*	A-4378-331-A	DBFB BOARD, COMPLETE				(E, AUS/N500:EA, MX, MY, PX, SP, AR)
		**************************************				
		< CAPACITOR >				
C401	1-124-257-00	ELECT	2.2uF	20%	50V	
C402	1-136-177-00	FILM	1uF	5%	50V	
C403	1-136-177-00	FILM	1uF	5%	50V	
C421	1-161-494-00	CERAMIC	0.022uF		25V	
C451	1-124-257-00	ELECT	2.2uF	20%	50V	
C452	1-136-177-00	FILM	1uF	5%	50V	
C453	1-136-177-00	FILM	1uF	5%	50V	
C471	1-161-494-00	CERAMIC	0.022uF		25V	
		< CONNECTOR >				
* CN401	1-564-506-11	PLUG, CONNECTOR 3P				
		< DIODE >				
D421	8-719-000-84	DIODE UZL-7M1				
D471	8-719-000-84	DIODE UZL-7M1				
		< IC >				
IC401	8-759-634-51	IC M5218AP				
		< TRANSISTOR >				
Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q402	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q403	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q451	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q452	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q473	8-729-119-76	TRANSISTOR 2SA1175-HFE				
		< RESISTOR >				
R401	1-249-437-11	CARBON	47K	5%	1/4W	
R402	1-247-807-31	CARBON	100	5%	1/4W	
R403	1-249-429-11	CARBON	10K	5%	1/4W	
R404	1-249-407-11	CARBON	150	5%	1/4W	
R405	1-249-417-11	CARBON	1K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R406	1-247-903-00	CARBON	1M	5%	1/4W	
R407	1-249-437-11	CARBON	47K	5%	1/4W	
R408	1-249-437-11	CARBON	47K	5%	1/4W	
R422	1-260-103-11	CARBON	2.2K	5%	1/2W	
R423	1-260-103-11	CARBON	2.2K	5%	1/2W	
R424	1-249-423-11	CARBON	3.3K	5%	1/4W	
R451	1-249-437-11	CARBON	47K	5%	1/4W	
R452	1-247-807-31	CARBON	100	5%	1/4W	
R453	1-249-429-11	CARBON	10K	5%	1/4W	
R454	1-249-407-11	CARBON	150	5%	1/4W	
R455	1-249-417-11	CARBON	1K	5%	1/4W	
R456	1-247-903-00	CARBON	1M	5%	1/4W	
R457	1-249-437-11	CARBON	47K	5%	1/4W	
R458	1-249-437-11	CARBON	47K	5%	1/4W	
R472	1-260-103-11	CARBON	2.2K	5%	1/2W	
R473	1-260-103-11	CARBON	2.2K	5%	1/2W	
R474	1-249-423-11	CARBON	3.3K	5%	1/4W	
**						
*	A-4377-248-A	MAIN BOARD, COMPLETE				(N600:AEP, UK, G, IT, EE, CIS)
*	A-4377-271-A	MAIN BOARD, COMPLETE				(N500:AEP, UK, G, IT, EE, CIS)
*	A-4377-274-A	MAIN BOARD, COMPLETE				(N500:E, EA, PX, SP, AR)
*	A-4377-816-A	MAIN BOARD, COMPLETE (N500:MX, MY, AUS)				
*	A-4378-418-A	MAIN BOARD, COMPLETE (N600:AUS)				
*	A-4378-419-A	MAIN BOARD, COMPLETE (N600:E)				
		**************************************				
	1-533-217-31	HOLDER, FUSE				
	1-537-770-11	TERMINAL BOARD, GROUND				
		< CAPACITOR >				
C101	1-162-286-31	CERAMIC	220PF	10%	50	(AEP, UK, G, IT, EE, CIS)
C151	1-162-286-31	CERAMIC	220PF	10%	50V	(AEP, UK, G, IT, EE, CIS)
C301	1-124-925-11	ELECT	2.2uF	20%	100V	
C302	1-162-282-31	CERAMIC	100PF	10%	50V	(AEP, UK, G, IT, EE, CIS)

Ref. No.	Part No.	Description	Remark
C303	1-162-286-31	CERAMIC 220PF 10% 50V	
C304	1-126-233-11	ELECT 22uF 20% 50V	
C305	1-124-910-11	ELECT 47uF 20% 50V	
C306	1-137-375-11	FILM 0.068uF 5% 50V	
C307	1-137-375-11	FILM 0.068uF 5% 50V	
C308	1-124-907-11	ELECT 10uF 20% 50V	
C309	1-124-122-11	ELECT 100uF 20% 50V	
C310	1-124-907-11	ELECT 10uF 20% 50V	
C311	1-137-375-11	FILM 0.068uF 5% 50V	(AEP, UK, G, IT, EE, CIS)
C312	1-137-375-11	FILM 0.068uF 5% 50V	(AEP, UK, G, IT, EE, CIS)
C322	1-162-306-11	CERAMIC 0.01uF 20% 16V	(N500:AEP, UK, G, IT, EE, CIS)
C330	1-162-294-31	CERAMIC 0.001uF 10% 50V	(AEP, UK, G, IT, EE, CIS)
C351	1-124-925-11	ELECT 2.2uF 20% 100V	
C352	1-162-282-31	CERAMIC 100PF 10% 50V	(AEP, UK, G, IT, EE, CIS)
C353	1-162-286-31	CERAMIC 220PF 10% 50V	
C354	1-126-233-11	ELECT 22uF 20% 50V	
C355	1-124-910-11	ELECT 47uF 20% 50V	
C356	1-137-375-11	FILM 0.068uF 5% 50V	
C357	1-137-375-11	FILM 0.068uF 5% 50V	
C358	1-124-907-11	ELECT 10uF 20% 50V	
C359	1-124-122-11	ELECT 100uF 20% 50V	
C361	1-137-375-11	FILM 0.068uF 5% 50V	(AEP, UK, G, IT, EE, CIS)
C362	1-137-375-11	FILM 0.068uF 5% 50V	(AEP, UK, G, IT, EE, CIS)
C372	1-162-306-11	CERAMIC 0.01uF 20% 16V	(AEP, UK, G, IT, EE, CIS)
C380	1-161-494-00	CERAMIC 0.022uF 25V	(AEP, UK, G, IT, EE, CIS)
C481	1-124-902-00	ELECT 0.47uF 20% 50V	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
C482	1-136-173-00	FILM 0.47uF 5% 50V	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
C501	1-104-666-11	ELECT 220uF 20% 6.3V	
C502	1-104-666-11	ELECT 220uF 20% 6.3V	
C503	1-124-925-11	ELECT 2.2uF 20% 100V	
C504	1-124-443-00	ELECT 100uF 20% 10V	
C505	1-124-910-11	ELECT 47uF 20% 50V	
C506	1-104-664-11	ELECT 47uF 20% 16V	
C601	1-164-159-11	CERAMIC 0.1uF 50V	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
C602	1-164-159-11	CERAMIC 0.1uF 50V	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
C603	1-124-464-11	ELECT 0.22uF 20% 50V	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
C604	1-124-464-11	ELECT 0.22uF 20% 50V	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
C605	1-124-907-11	ELECT 10uF 20% 50V	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
C701	1-136-169-00	FILM 0.22uF 5% 50V	
C702	1-136-169-00	FILM 0.22uF 5% 50V	
C703	1-126-138-11	ELECT 4700uF 20% 50V	
C704	1-126-138-11	ELECT 4700uF 20% 50V	
C705	1-124-477-11	ELECT 47uF 20% 25V	
C706	1-136-165-00	FILM 0.1uF 5% 50V	
C707	1-136-165-00	FILM 0.1uF 5% 50V	
C708	1-136-169-00	FILM 0.22uF 5% 50V	
C709	1-136-169-00	FILM 0.22uF 5% 50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN1	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
CN2	1-564-321-00	PIN, CONNECTOR 2P	(AEP, UK, G, IT, EE, CIS, AUS, /N500:MX, MY)
* CN2	1-564-687-11	PIN, CONNECTOR 3P	(E/N500:EA, PX, SP, AR)
* CN4	1-564-321-21	PIN, CONNECTOR 2P	(N600)
CN101	1-770-248-31	HOUSING, CONNECTOR(PC BOARD)16P	(SYSTEM CONTROL 2)
CN102	1-764-016-21	HOUSING, CONNECTOR(PC BOARD)5P	(SYSTEM CONTROL 4) (N600)
* CN103	1-568-828-11	SOCKET, CONNECTOR 9P	(N500)
* CN103	1-568-830-11	SOCKET, CONNECTOR 11P	(N600)
CN104	1-506-468-11	PIN, CONNECTOR 3P	
CN301	1-564-506-11	PLUG, CONNECTOR 3P	
CN302	1-770-594-21	CONNECTOR, BOARD TO BOARD 5P	
CN481	1-506-469-11	PIN, CONNECTOR 4P	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
CN602	1-564-505-11	PLUG, CONNECTOR 2P	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
CN603	1-506-468-11	PIN, CONNECTOR 3P	(E, AUS/N500:EA, MX, MY, PX, SP, AR)

< DIODE >

Ref. No.	Part No.	Description	Remark
D301	8-719-987-63	DIODE 1N4148M	
D303	8-719-815-85	DIODE 1S1585	
D304	8-719-815-85	DIODE 1S1585	(N600)
D351	8-719-987-63	DIODE 1N4148M	

MAIN

Ref. No.	Part No.	Description	Remark
D481	8-719-987-63	DIODE 1N4148M	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
D501	8-719-987-63	DIODE 1N4148M	
D502	8-719-987-63	DIODE 1N4148M	
D601	8-719-987-63	DIODE 1N4148M	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
D602	8-719-987-63	DIODE 1N4148M	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
D701	8-719-028-23	DIODE D3SBA20-4101	(AEP, UK, G, IT, EE, CIS)
D701	8-719-510-68	DIODE D5SBA20F01	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
D702	8-719-987-63	DIODE 1N4148M	
D703	8-719-987-63	DIODE 1N4148M	
D704	8-719-024-99	DIODE 11ES2-NTA2B	
D705	8-719-024-99	DIODE 11ES2-NTA2B	
D706	8-719-024-99	DIODE 11ES2-NTA2B	
D707	8-719-024-99	DIODE 11ES2-NTA2B	
D708	8-719-024-99	DIODE 11ES2-NTA2B	
		< FUSE >	
⚠F1	1-532-286-00	FUSE (T2.5A 250V) (N600)	
⚠F701	1-532-299-00	FUSE (T5A 250V)	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
⚠F701	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
⚠F702	1-532-299-00	FUSE (T5A 250V)	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
⚠F702	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
⚠F703	1-532-286-00	FUSE (T2.5A 250V)	
⚠F704	1-532-286-00	FUSE (T2.5A 250V)	
		< IC >	
IC301	8-749-920-09	IC STK-4152MK2K (AEP, UK, G, IT, EE, CIS)	
IC301	8-749-900-34	IC STK-4182MK2	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
IC501	8-759-111-68	IC uPC1237HA	
IC601	8-759-103-93	IC uPC393C	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
		< COIL >	
L301	1-420-872-00	COIL, AIR-CORE	
L302	1-420-872-00	COIL, AIR-CORE (N500:AEP, UK, G, IT, EE, CIS)	
L351	1-420-872-00	COIL, AIR-CORE	
L352	1-420-872-00	COIL, AIR-CORE (N500:AEP, UK, G, IT, EE, CIS)	
		< TRANSISTOR >	
Q301	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q351	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q501	8-729-900-63	TRANSISTOR DTA124ES	
Q502	8-729-900-36	TRANSISTOR DTC124ES	
Q503	8-729-900-36	TRANSISTOR DTC124ES	
Q504	8-729-900-36	TRANSISTOR DTC124ES	
Q505	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q601	8-729-140-93	TRANSISTOR 2SB733-34	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
		< RESISTOR >	
R101	1-247-807-31	CARBON 100 5% 1/4W	
R102	1-249-441-11	CARBON 100K 5% 1/4W	
R151	1-247-807-31	CARBON 100 5% 1/4W	
R152	1-249-441-11	CARBON 100K 5% 1/4W	
R301	1-249-417-11	CARBON 1K 5% 1/4W	
R302	1-249-438-11	CARBON 56K 5% 1/4W	
R303	1-249-413-11	CARBON 470 5% 1/4W	
R304	1-249-438-11	CARBON 56K 5% 1/4W	
R305	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R305	1-249-427-11	CARBON 6.8K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R306	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R306	1-249-427-11	CARBON 6.8K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R307	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R307	1-249-427-11	CARBON 6.8K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R308	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R308	1-249-427-11	CARBON 6.8K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
⚠R309	1-212-881-11	FUSIBLE 100 5% 1/4W	F
⚠R310	1-217-156-00	WIREWOUND 0.22 10% 5W	F
R311	1-249-417-11	CARBON 1K 5% 1/4W	
R312	1-249-431-11	CARBON 15K 5% 1/4W	
R313	1-249-441-11	CARBON 100K 5% 1/4W	
R314	1-249-397-11	CARBON 22 5% 1/4W	
R315	1-249-397-11	CARBON 22 5% 1/4W	
R316	1-249-438-11	CARBON 56K 5% 1/4W	
R317	1-249-421-11	CARBON 2.2K 5% 1/4W	
R318	1-249-421-11	CARBON 2.2K 5% 1/4W	
⚠R319	1-249-383-11	CARBON 1.5 5% 1/6W	F
⚠R320	1-215-890-11	METAL OXIDE 470 5% 2W	F (AEP, UK, G, IT, EE, CIS)
⚠R320	1-215-891-11	METAL OXIDE 680 5% 2W	F (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R321	1-260-074-11	CARBON 6.8 5% 1/2W	(AEP, UK, G, IT, EE, CIS)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
R322	1-260-095-11	CARBON 470 5% 1/2W	
R324	1-260-076-11	CARBON 10 5% 1/2W	
R351	1-249-417-11	CARBON 1K 5% 1/4W	
R352	1-249-438-11	CARBON 56K 5% 1/4W	
R353	1-249-413-11	CARBON 470 5% 1/4W	
R354	1-249-438-11	CARBON 56K 5% 1/4W	
R355	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R355	1-249-427-11	CARBON 6.8K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R356	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R356	1-249-427-11	CARBON 6.8K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R357	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R357	1-249-427-11	CARBON 6.8K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R358	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R358	1-249-427-11	CARBON 6.8K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
⚠R359	1-212-881-11	FUSIBLE 100 5% 1/4W F	
⚠R360	1-217-156-00	WIREWOUND 0.22 10% 5W F	
R361	1-249-417-11	CARBON 1K 5% 1/4W	
R362	1-249-431-11	CARBON 15K 5% 1/4W	
R363	1-249-441-11	CARBON 100K 5% 1/4W	
R364	1-249-397-11	CARBON 22 5% 1/4W	
R365	1-249-397-11	CARBON 22 5% 1/4W	
R366	1-249-437-11	CARBON 47K 5% 1/4W	
R367	1-249-421-11	CARBON 2.2K 5% 1/4W	
R368	1-249-421-11	CARBON 2.2K 5% 1/4W	
R371	1-260-074-11	CARBON 6.8 5% 1/2W	(AEP, UK, G, IT, EE, CIS)
R372	1-260-095-11	CARBON 470 5% 1/2W	
R374	1-260-076-11	CARBON 10 5% 1/2W	
R421	1-249-429-11	CARBON 10K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R471	1-249-429-11	CARBON 10K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R481	1-249-411-11	CARBON 330 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R482	1-249-417-11	CARBON 1K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R483	1-247-887-00	CARBON 220K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R501	1-249-429-11	CARBON 10K 5% 1/4W	
R502	1-249-441-11	CARBON 100K 5% 1/4W	
R503	1-249-437-11	CARBON 47K 5% 1/4W	
R504	1-249-430-11	CARBON 12K 5% 1/4W	
R505	1-249-441-11	CARBON 100K 5% 1/4W	
R506	1-249-411-11	CARBON 330 5% 1/4W	
R507	1-249-411-11	CARBON 330 5% 1/4W	
R508	1-249-439-11	CARBON 68K 5% 1/4W	
R509	1-249-441-11	CARBON 100K 5% 1/4W	
R510	1-249-429-11	CARBON 10K 5% 1/4W	
R511	1-249-437-11	CARBON 47K 5% 1/4W	
R512	1-249-417-11	CARBON 1K 5% 1/4W	
R513	1-249-437-11	CARBON 47K 5% 1/4W	
R514	1-249-429-11	CARBON 10K 5% 1/4W	
R515	1-247-881-00	CARBON 120K 5% 1/4W	
R601	1-247-807-31	CARBON 100 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R602	1-249-441-11	CARBON 100K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R603	1-249-417-11	CARBON 1K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R604	1-249-427-11	CARBON 6.8K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R605	1-249-439-11	CARBON 68K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R606	1-249-417-11	CARBON 1K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R607	1-249-417-11	CARBON 1K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R608	1-249-417-11	CARBON 1K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R609	1-249-417-11	CARBON 1K 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R610	1-249-396-11	CARBON 18 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R611	1-249-389-11	CARBON 4.7 5% 1/4W	(E, AUS/N500:EA, MX, MY, PX, SP, AR)
R701	1-249-427-11	CARBON 6.8K 5% 1/4W	
R702	1-249-427-11	CARBON 6.8K 5% 1/4W	
		< RELAY >	
RY301	1-515-920-11	RELAY (24V)	
		< TRANSFORMER >	
⚠T1	1-427-773-11	TRANSFORMER, POWER	(AEP, UK, G, IT, EE, CIS)
⚠T1	1-427-774-11	TRANSFORMER, POWER	(E, AUS/N500:EA, MY, PX, SP, AR)
⚠T1	1-427-907-11	TRANSFORMER, POWER	(N500:MX)

The components identified by
mark ⚠ or dotted line with mark
⚠ are critical for safety.
Replace only with part number
specified.

MAIN PANEL HEADPHONE TEMPERATURE SENSOR

VOLTAGE SELECTION

Ref. No.	Part No.	Description	Remark
		< TERMINAL >	
TM301	1-537-842-11	TERMINAL BOARD (SPEAKER) (AEP, UK, G, IT, EE, CIS)	
TM301	1-537-240-11	TERMINAL BOARD (CHECKER PIN) (SPEAKER) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
TM302	1-537-240-11	TERMINAL BOARD (CHECKER PIN) (SURROUND SPEAKER) (N500)	
**			
*	A-4377-331-A	PANEL BOARD, COMPLETE (N500:E, EA, MX, MY, PX, SP, AR, AUS)	
*	A-4377-273-A	PANEL BOARD, COMPLETE (N500:AEP, UK, G, IT, EE, CIS)	
*	A-4377-249-A	PANEL BOARD, COMPLETE (N600)	
		**************************************	
		< CAPACITOR >	
C201	1-124-925-11	ELECT 2.2uF 20% 100V	
C203	1-124-443-00	ELECT 100uF 20% 10V	
C204	1-161-494-00	CERAMIC 0.022uF 25V	
C251	1-124-925-11	ELECT 2.2uF 20% 100V	
		< CONNECTOR >	
* CN201	1-568-830-11	SOCKET, CONNECTOR 11P (N600)	
* CN201	1-568-828-11	SOCKET, CONNECTOR 9P (N500)	
		< DIODE >	
D201	8-719-045-39	LED SML12460C-TP4 (SYSTEM POWER)	
D202	8-719-024-99	DIODE 11ES2-NTA2B	
D203	8-719-024-99	DIODE 11ES2-NTA2B	
D204	8-719-987-63	DIODE 1N4148M	
D205	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC201	8-759-820-62	IC LB1639	
		< TRANSISTOR >	
Q201	8-729-900-36	TRANSISTOR DTC124ES	
Q202	8-729-422-57	TRANSISTOR UN4111	
Q205	8-729-422-57	TRANSISTOR UN4111	
		< RESISTOR >	
R201	1-249-421-11	CARBON 2.2K 5% 1/4W	
R202	1-249-421-11	CARBON 2.2K 5% 1/4W	
R203	1-249-417-11	CARBON 1K 5% 1/4W	
R211	1-249-413-11	CARBON 470 5% 1/4W	
R212	1-249-419-11	CARBON 1.5K 5% 1/4W	
R213	1-249-425-11	CARBON 4.7K 5% 1/4W	
R214	1-249-432-11	CARBON 18K 5% 1/4W	
R217	1-249-419-11	CARBON 1.5K 5% 1/4W	
R218	1-249-423-11	CARBON 3.3K 5% 1/4W	
R219	1-249-437-11	CARBON 47K 5% 1/4W	
R220	1-249-417-11	CARBON 1K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV201	1-223-847-11	RES, VAR, CARBON 100K (BALANCE)	
RV202	1-223-845-11	RES, VAR, CARBON 10K/100KX2 (MASTER VOLUME) (N600)	
RV202	1-223-844-11	RES, VAR, CARBON 100KX2 (VOLUME) (N500)	
		< SWITCH >	
S201	1-554-303-21	SWITCH, TACTILE (DBFB)	
S202	1-554-303-21	SWITCH, TACTILE (SURROUND) (N500)	
S202	1-554-303-21	SWITCH, TACTILE (S-SURROUND) (N600)	
S203	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S204	1-554-303-21	SWITCH, TACTILE (SLEEP)	
S205	1-554-303-21	SWITCH, TACTILE (FUNCTION)	
**			
*	1-654-890-11	HEADPHONE BOARD	
		***************	
		< CONNECTOR >	
CN303	1-770-593-41	CONNECTOR, BOARD TO BOARD 5P	
		< JACK >	
J301	1-580-903-11	JACK, LARGE TYPE (PHONES)	
**			
*	1-654-892-12	TEMPERATURE SENSOR BOARD (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
		**************************************	
		< CAPACITOR >	
C606	1-164-159-11	CERAMIC 0.1uF 50V	
		< IC >	
IC602	8-759-947-34	IC LM35DZ	
		< RESISTOR >	
R612	1-247-807-31	CARBON 100 5% 1/4W	
**			
*	1-654-891-11	VOLTAGE SELECTION BOARD (E/N500:EA, PX, SP, AR)	
		**************************************	
		< CAPACITOR >	
CN3	1-568-106-11	PIN, CONNECTOR 4P	

Ref. No.	Part No.	Description	Remark
		< VOLTAGE SELECTOR >	
⚠VS1	1-762-298-11	SW, AC POWER VOLTAGE SELECTOR	(VOLTAGE SELECTOR)

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MISCELLANEOUS

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Ref. No.	Part No.	Description	Remark
7	1-590-218-11	WIRE, FLAT TYPE (11 CORE) (N600)	
* 7	1-590-240-11	WIRE, FLAT TYPE (9 CORE) (N500)	
7	1-590-240-31	WIRE, FLAT TYPE (9 CORE) (N500)	
⚠60	1-569-007-11	ADAPTER, CONVERSION 2P (N500:E3, PX)	
⚠60	1-569-008-11	ADAPTER, CONVERSION 2P (N500:EA, SP)	
⚠CNJ1	1-526-751-12	OUTLET, AC (N600:UK)	
⚠CNJ1	1-526-794-11	OUTLET, AC (N600:AEP, G, IT, EE, CIS)	
⚠CNJ1	1-526-882-00	OUTLET, AC (N600:E)	
⚠CNJ1	1-540-196-11	OUTLET, AC (N600:AUS)	
⚠CNP1	1-558-943-41	CORD, POWER (E/N500:MX, PX)	
⚠CNP1	1-575-651-21	CORD, POWER (AEP, G, IT, EE, CIS/N500:EA, MY, SP, AR)	
⚠CNP1	1-696-845-11	CORD, POWER (AUS)	
⚠CNP1	1-751-529-11	CORD, POWER (UK)	
⚠F1	1-532-286-00	FUSE (T2.5A 250V) (N600)	
⚠F701	1-532-299-00	FUSE (T5A 250V) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
⚠F701	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
⚠F702	1-532-299-00	FUSE (T5A 250V) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
⚠F702	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
⚠F703	1-532-286-00	FUSE (T2.5A 250V)	
⚠F704	1-532-286-00	FUSE (T2.5A 250V)	
⚠T1	1-427-773-11	TRANSFORMER, POWER (AEP, UK, G, IT, EE, CIS)	
⚠T1	1-427-774-11	TRANSFORMER, POWER (E, AUS/N500:EA, MY, PX, SP, AR)	
⚠T1	1-427-907-11	TRANSFORMER, POWER (N500:MX)	

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HARDWARE LIST

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#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S
#3	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S
#4	7-682-560-04	SCREW +BVTT 4X6 (S)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

English
95C0586-1
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© 1995. 3

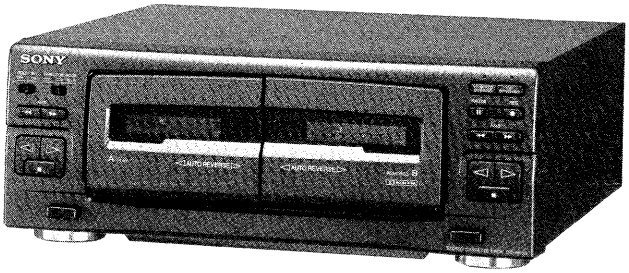
Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

Published by Home A&V Products Div.
Quality Engineering Dept.

TC-N500

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
PX Model



TC-N500 are the Stereo Cassette Deck section in LBT-N500/N550/N550K/N550P and LBT-N600AV/N650AV.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⅅⅅ are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	HCD-A390
Tape Transport Mechanism Type	DECK A: TCM-190RA12AL DECK B: TCM-190RB53A

SPECIFICATIONS

Recording system
4-track 2-channel stereo
Frequency response
DOLBY NR OFF
With Sony Type II cassette
40 Hz to 14 kHz (±3dB)
With Sony Type I cassette
40 Hz to 13 kHz (±3dB)
Wow and flutter
0.1% (W.RMS)
±0.2% (W.Peak)
Weight Approx. 3.3 kg
Dimensions
Approx. 355 x 130 x 310 mm
(w/h/d, including projections)

Design and specifications are subject to change without notice.

STEREO CASSETTE DECK

SONY®

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SERVICING NOTES

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

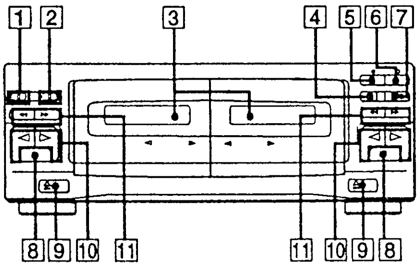
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

• Power Supply Used Servicing

This Unit does not have its own power supply. As it works on the power supplied from the amplifier (STR-N500/N600) used for this series, connect this amplifier when servicing the unit (conduction repair, etc.).

SECTION 1
GENERAL

This section is extracted from LBT-N500 instruction manual.



1 DOLBY NR switch (16)
2 DIRECTION MODE selector (16)
3 Cassette compartments (16)
4 ❚❚ PAUSE button (16)
5 HI-SPEED DUBBING button (20)
6 CD SYNCRO button (17, 19)
7 ● REC button (17)
8 ■ (stop) buttons (16)
9 ≙ EJECT buttons (16)
10 ▷ (front side play)
◁ (reverse side play) buttons (16, 17)
11 ◀◀ (fast leftward) AMS
▶▶ (fast rightward) AMS buttons (16)

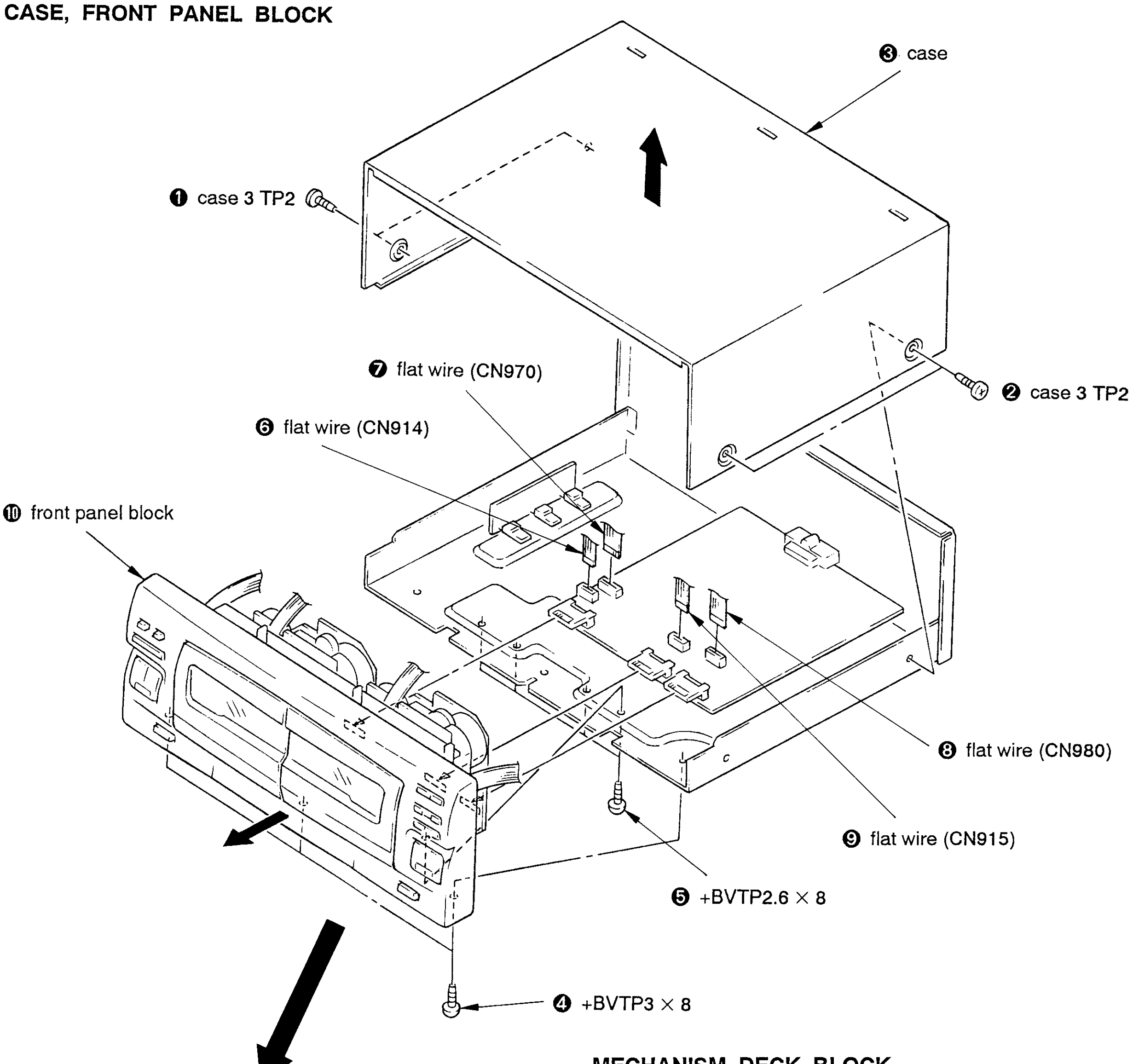
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

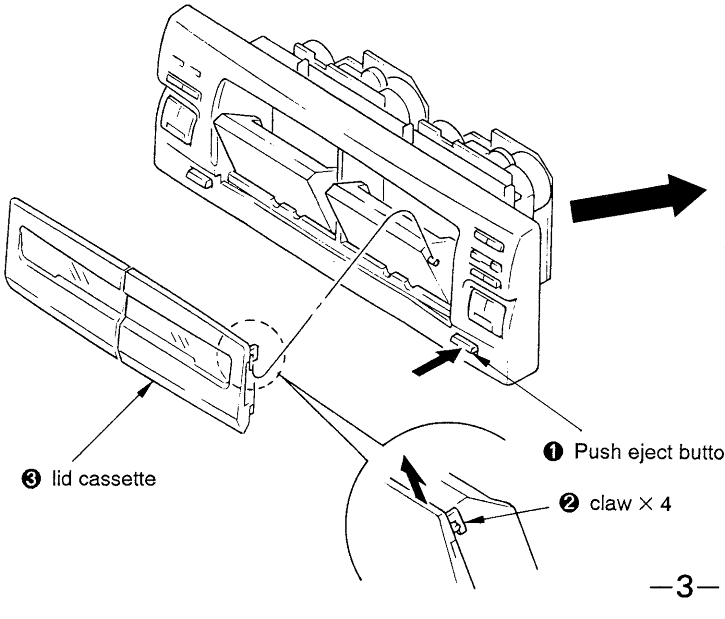
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

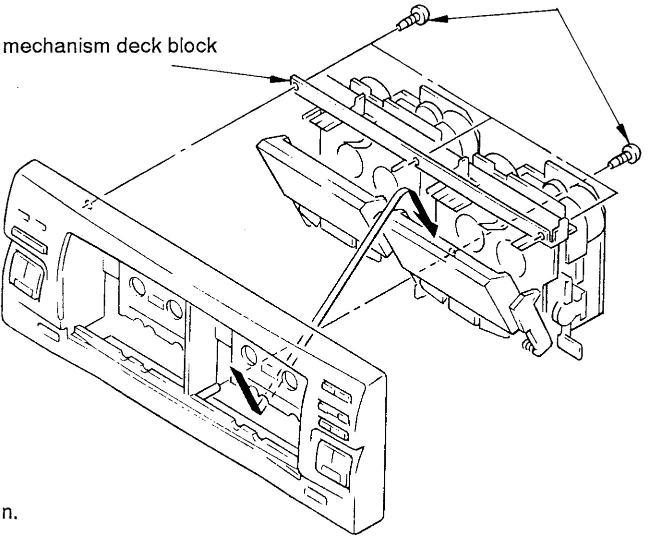
CASE, FRONT PANEL BLOCK


❸ case
❶ case 3 TP2
❷ case 3 TP2
❼ flat wire (CN970)
❻ flat wire (CN914)
❿ front panel block
❽ flat wire (CN980)
❾ flat wire (CN915)
❺ +BVTP2.6 × 8
❹ +BVTP3 × 8

LID CASSETTE


❶ Push eject button.
❷ claw × 4
❸ lid cassette

MECHANISM DECK BLOCK


❶ +BVTP2.6 × 8
❸ mechanism deck block

SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTIONS:

1. Clean the following parts with a denatured-alcoholmoistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idler

2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustment, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

- **Torque Measurement**

Mode	Torque meter	Meter reading	
FWD	CQ-102C	30 to 65 g•cm (0.42 to 0.90 oz•inch)	
FWD Back tension		DECK A	1 to 6 g•cm (0.014 to 0.08 oz•inch)
		DECK B	2 to 9 g•cm (0.028 to 0.124 oz•inch)
REV	CQ-102RC	30 to 65 g•cm (0.42 to 0.90 oz•inch)	
REV Back tension		1 to 6 g•cm (0.014 to 0.08 oz•inch)	
FF, REW	CQ-201B	70 to 120 g•cm (0.98 to 1.66 oz•inch)	

SECTION 4
ELECTRICAL ADJUSTMENTS

1. The adjustment should be performed in the publication.
   (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
   - Switche position
     DOLBY NR switch : OFF

- **Test Tape**

Tape	Contents	Used for
P-4-A100	10 kHz, − 10 dB	Head Azimuth Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

0 dB = 0.775 V

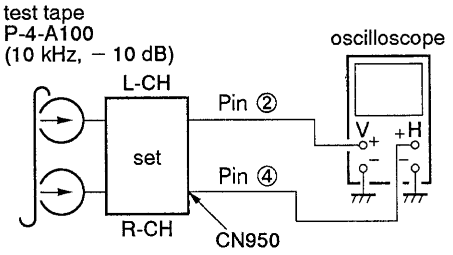
Record/Playback Head Azimuth Adjustment

DECK A

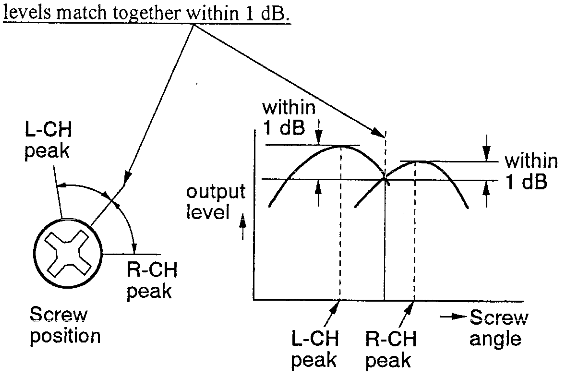
DECK B

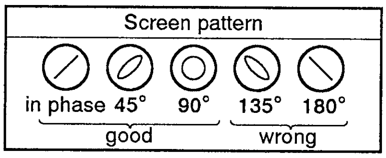
Procedure:

1. FWD/REV: Playback Mode



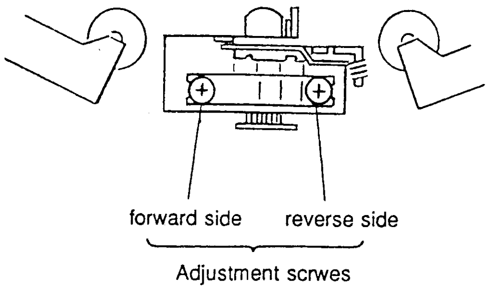
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.


L-CH peak
R-CH peak
Screw position
within 1 dB
within 1 dB
output level
L-CH peak
R-CH peak
Screw angle


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

3. Change the REV playback mode and repeat the step 1 to 2.
4. After the adjustments, lock the adjustment screw with suitable locking compound.

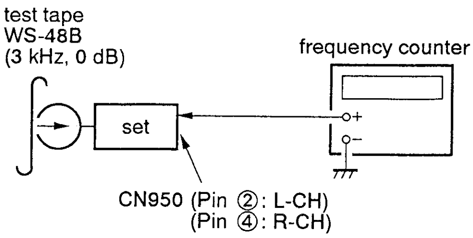
Adjustment Location:


forward side
reverse side
Adjustment scrwes

Tape Speed Adjustment DECK A DECK B

Procedure:

- Perform high speed adjustment before normal speed adjustment.
  Mode: playback


test tape
WS-48B
(3 kHz, 0 dB)
frequency counter
set
CN950 (Pin ②: L-CH)
(Pin ④: R-CH)

(High Speed Adjustment)

1. Short-circuit CN902 (TC board) when the power off.
2. Turn on the power, press the DUB switch, and set high speed playback.
3. Set decks A and B into the FWD mode.
4. Adjust deck A: RV72A (H) and deck B: RV72B (H) so that the reading of the frequency counter becomes the adjustment value.
5. After adjusting, short-circuit CN902.

(Normal Speed Adjustment)

1. Set the FWD playback mode.
2. Adjust deck A: RV71A (N), deck B: RV71B (N) so that the reading of the frequency counter becomes the adjustment value.

Adjustment Values:

High Speed	6,000 ± 20 Hz
Normal Speed	3,000 ± 10 Hz

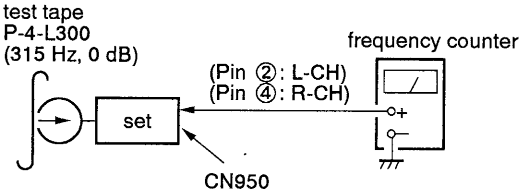
Adjust so that the difference between tape top and tape end is within 3%. Adjust so that the deviation between the speeds of deck A and deck B at the tape top is within 1.0%.

Adjustment Location: AUDIO (A), (B) boards

Playback Level Adjustment DECK A DECK B

Procedure:

Mode: playback


test tape
P-4-L300
(315 Hz, 0 dB)
frequency counter
(Pin ②: L-CH)
(Pin ④: R-CH)
set
CN950

Adjust deck A: RV11A (L-CH) and RV21A (R-CH), deck B: RV11B (L-CH) and RV21B (R-CH) so that within the adjustment values specified. The output level is within the adjustment values specified.

Adjustable Level:

CN950 level: − 7.7 dB ± 0.5 dB (0.30 to 0.34 V)
Level Difference between Channels: within 1.0 dB

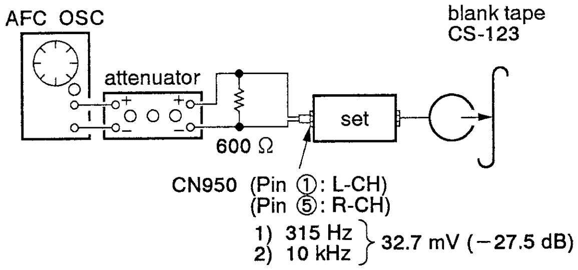
Confirm the level does not change in playback mode while changing the mode from playback to stop several time.

Adjustment Location: AUDIO (A), (B) boards

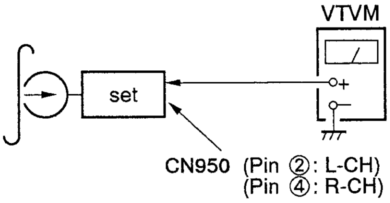
Record BIAS Adjustment DECK B

Procedure:

1. Mode: record


AFC OSC
attenuator
600 Ω
set
blank tape
CS-123
CN950 (Pin ①: L-CH)
(Pin ⑤: R-CH)
1) 315 Hz
2) 10 kHz
32.7 mV (−27.5 dB)

2. Mode: playback


VTVM
set
CN950 (Pin ②: L-CH)
(Pin ④: R-CH)

Confirm playback the signal recorded in step 1 become adjustment level as follows.
If these levels do not adjustment level, adjust the RV12 (L-CH) and RV22 (R-CH) to repeat step 1 and 2.

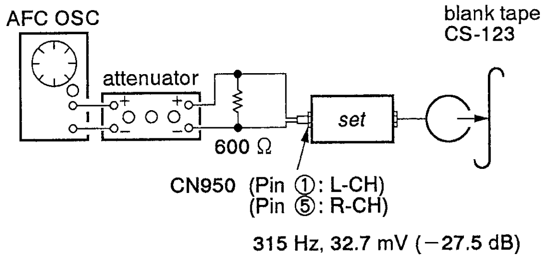
Adjustment Level: Playback output of 10 kHz to playback output of 315 Hz: ± 0.5 dB.

Adjustment Location: AUDIO (B) board

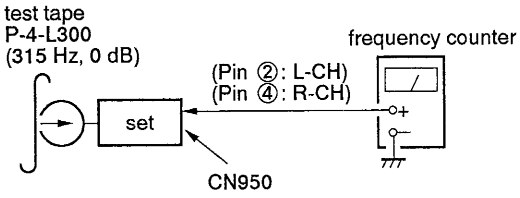
Record Level Adjustments DECK B

Procedure:

1. Mode: record


AFC OSC
attenuator
600 Ω
set
blank tape
CS-123
CN950 (Pin ①: L-CH)
(Pin ⑤: R-CH)
315 Hz, 32.7 mV (−27.5 dB)

2. Mode: playback


test tape
P-4-L300
(315 Hz, 0 dB)
frequency counter
(Pin ②: L-CH)
(Pin ④: R-CH)
set
CN950

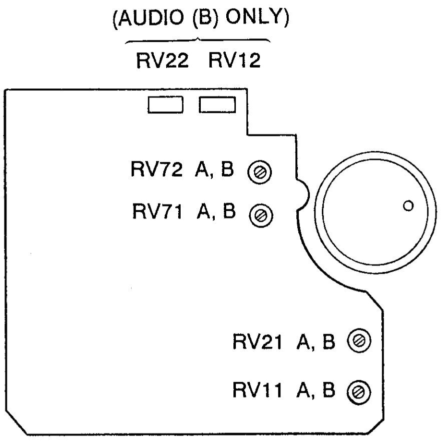
Confirm playback the signal recorded in step 1 become adjustment level as follows.
If these levels do not adjustment level, adjust the RV101 (L-CH) and RV201 (R-CH) to repeat step 1 and 2.

Adjustment Level:
CN950 PB level: − 27.5 dB ± 0.5 dB (31 to 35 mV).

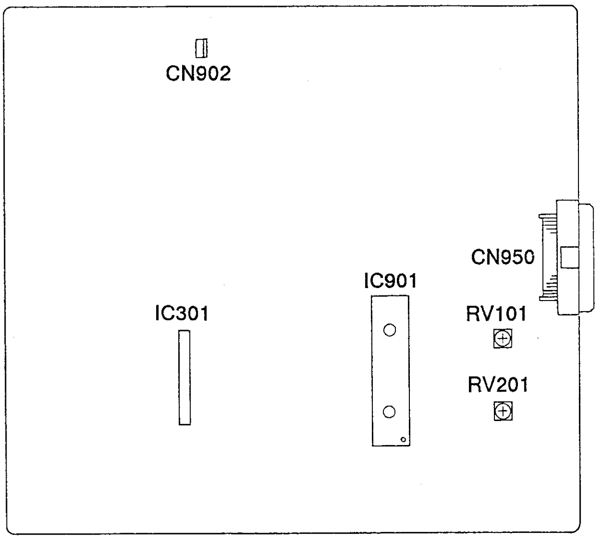
Adjustment Location: MAIN board

Adjusting Parts Location:

【AUDIO (A), AUDIO (B) Board】 – Conductor Side –


(AUDIO (B) ONLY)
RV22 RV12
RV72 A, B
RV71 A, B
RV21 A, B
RV11 A, B

【MAIN Board】 – Component Side –


CN902
CN950
IC901
IC301
RV101
RV201

SECTION 5
DIAGRAMS

5-1. IC PIN FUNCTION DESCRIPTION
MAIN BOARD IC901 M50964-261FP (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Function
1	G	–	GND
2	G	–	
3	G	–	
4	—	–	+5V
5	$\overline{\text{NORM}}$/HIGH	–	Tape speed "H"=High speed "L"=Normal speed
6	B HALF	I	Deck B record prevention claw A, B detection input (Analog)

Voltage (V)	1V	1.9V	2.8V	3.9V	5V
Half	ON	ON	ON	ON	OFF
E. PROOF A	OFF	ON	OFF	ON	OFF
E. PROOF B	ON	ON	OFF	OFF	OFF

Pin No.	Pin Name	I/O	Function
7	KEY Y	I	KEY input
8	KEY X	I	

Voltage (V)	0	0.3	0.7	1.2	1.7	2.3	2.8	3.4	4.0	4.5	5.0
KEY Y	B ■	B ❚❚	B ▶	B ◀		A ◀◀	A ▶▶			RELAY	OFF
KEY X	A ■	A ▶	A ◀	B ◀◀	B ▶▶	B ●	DUB		CD		

Pin No.	Pin Name	I/O	Function
9	AMS IN	I	AMS signal input
10	LM ON/$\overline{\text{OFF}}$	O	Line mute output
11	RM $\overline{\text{ON}}$/OFF	O	Mute output
12	RELAY $\overline{\text{ON}}$/OFF	O	REC/PB change relay output
13	$\overline{\text{REC}}$/PB	O	Dolby IC REC/PB select output
14	EQ70	O	Playback EQ output for playing deck (Not used)
15	SEL A/$\overline{\text{B}}$	O	Dolby IC PB input Deck A/B select output
16	AMS MUTE	O	AMS mute output
17	AU BUS	I	AUDIO BUS input
18	BIAS ON/$\overline{\text{OFF}}$	O	Bias oscillation output
19	AUB OUT	O	AUDIO BUS output
20	A BUS	I	AUDIO BUS normal input
21	NC	–	Not used
22	NC	–	GND
23	NC	–	
24	Vss	–	
25	RESET	I	Microcomputer reset input
26	XIN	I	Clock input (4 MHz)
27	XOUT	O	Clock output (4 MHz)
28	ϕ	O	Not used (open)
29	Vss	–	GND
30	PW IN	I	
31	A STOP	I	Deck A STOP switch input
32	A HALF	I	Deck A Half switch input
33	A SHUT	I	Deck A Reel table signal input
34	A70 U	I	GND
35	B STOP	I	Deck B STOP switch input

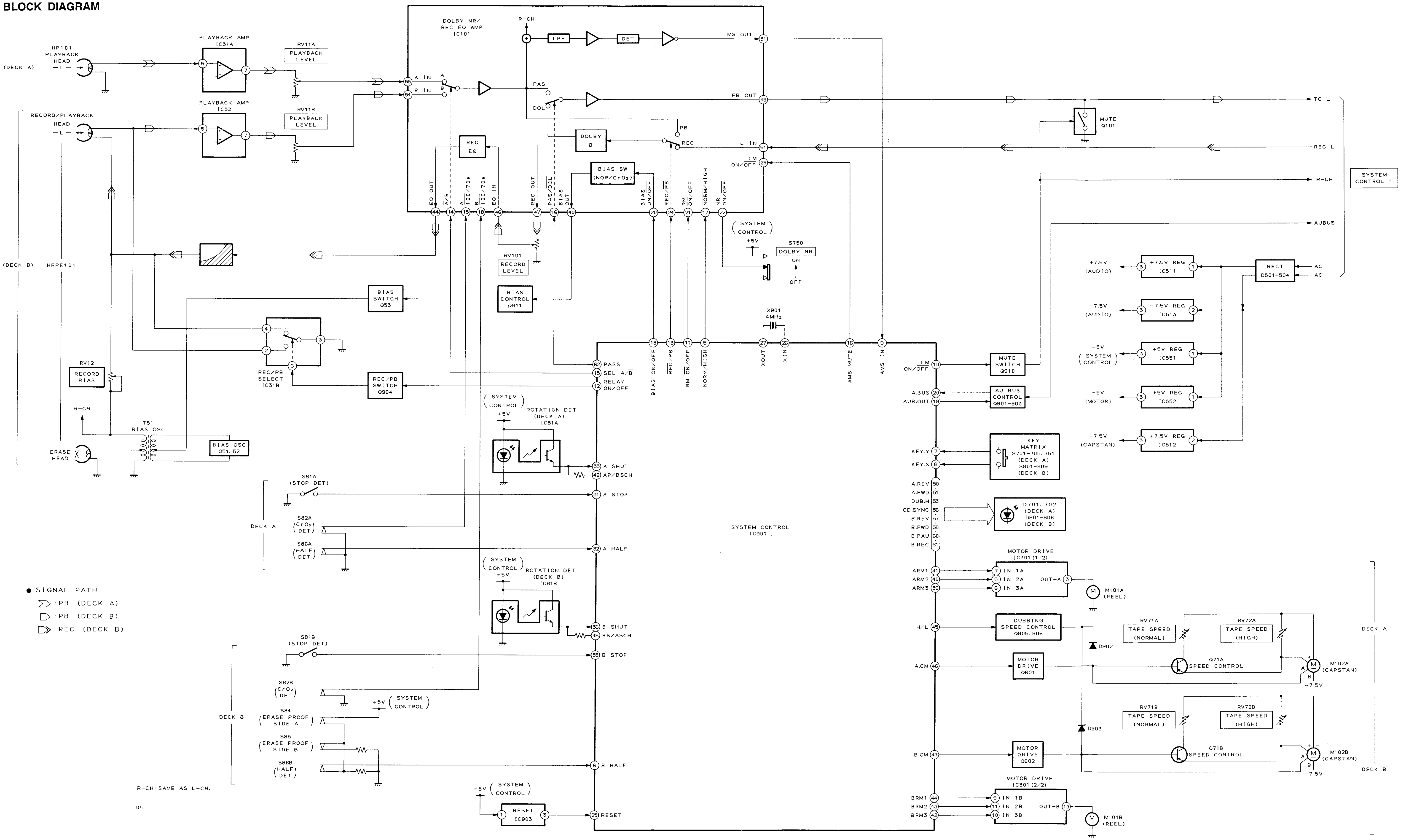
Pin No.	Pin Name	I/O	Function
36	B SHUT	I	Deck B Reel table signal input
37	B70 U	I	+5V
38	NC	–	Not used
39	ARM 3	O	Deck A Reel Motor control out
40	ARM 2	O	
41	ARM 1	O	
42	BRM 3	O	Deck B Reel Motor control out
43	BRM 2	O	
44	BRM 1	O	
45	H/L	O	Capstan motor speed select
46	A CM	O	A Capstan motor ON/OFF
47	B CM	O	B Capstan motor ON/OFF
48	BS/ASCH	I	Deck B Reel table/BS signal input
49	AP/BSCH	I	Deck A Reel table/AP signal input
50	A REV	O	Deck A RVS LED output
51	A FWD	O	Deck A FWD LED output
52	A PLAY	O	Deck B RVS/FWD LED control output (Not used)
53	DUB H	O	High Speed Dubbing LED output
54	DUB N	O	Normal Speed Dubbing LED output (Not used)
55	NC	–	Not used
56	CD SYNC	O	Auto CD Synchro LED output
57	B REV	O	Deck B RVS LED output
58	B FWD	O	Deck B FWD LED output
59	B PLAY	O	Deck B RVS/FWD LED control output (Not used)
60	B PAUSE	O	Deck B PAUSE LED output
61	B REC	O	Deck B REC LED output
62	PASS	O	PASS amplifier switch output
63	TEST	I	Electrical adjustment test mode setting
64	NC	–	+5 V
65	Vss	–	GND
66	NC	–	Not used
67	Vcc	–	POWER 5 ± 0.5V
68	AVss	–	Analog system GND
69	VREF	I	Analog system reference voltage input
70	DAC	–	GND
71	—	–	
72	—	–	

[TEST MODE]

When making pin (63) low (connect pin ① of CN902 to ground with jumper wire), following function operates.

1. Source monitor
   Release the line mute while recording.

5-2. BLOCK DIAGRAM


HP101 PLAYBACK HEAD
(DECK A)
PLAYBACK AMP IC31A
RV11A PLAYBACK LEVEL
RECORD/PLAYBACK HEAD
PLAYBACK AMP IC32
RV11B PLAYBACK LEVEL
(DECK B)
HRPE101
DOLBY NR/ REC EQ AMP IC101
R-CH
LPF
DET
MS OUT
A IN
B IN
PAS
DOL
PB OUT
PB
REC
DOLBY B
L IN
LM ON/OFF
REC EQ
BIAS SW (NOR/CrO2)
EQ OUT
A/B
A 120/70μ
B 120/70μ
EQ IN
REC OUT
PAS/DOL
BIAS OUT
BIAS ON/OFF
REC/PB
RM ON/OFF
NORM/HIGH
NR ON/OFF
(SYSTEM CONTROL)
+5V
S750 DOLBY NR
ON
OFF
RV101 RECORD LEVEL
BIAS SWITCH Q53
BIAS CONTROL Q911
REC/PB SELECT IC31B
REC/PB SWITCH Q904
RV12 RECORD BIAS
R-CH
T51 BIAS OSC
BIAS OSC Q51, 52
ERASE HEAD
X901 4MHz
XOUT
XIN
AMS MUTE
AMS IN
PASS
SEL A/B
RELAY ON/OFF
(SYSTEM CONTROL) +5V
ROTATION DET (DECK A) IC81A
A SHUT
AP/BSCH
S81A (STOP DET)
A STOP
DECK A
S82A (CrO2 DET)
S86A (HALF DET)
A HALF
ROTATION DET (DECK B) IC81B
B SHUT
BS/ASCH
S81B (STOP DET)
B STOP
DECK B
S82B (CrO2 DET)
S84 (ERASE PROOF SIDE A)
S85 (ERASE PROOF SIDE B)
S86B (HALF DET)
B HALF
+5V (SYSTEM CONTROL)
RESET IC903
RESET
SYSTEM CONTROL IC901
TC L
MUTE Q101
REC L
R-CH
SYSTEM CONTROL 1
AUBUS
+7.5V (AUDIO)
+7.5V REG IC511
RECT D501-504
AC
AC
-7.5V (AUDIO)
-7.5V REG IC513
+5V (SYSTEM CONTROL)
+5V REG IC551
+5V (MOTOR)
+5V REG IC552
-7.5V (CAPSTAN)
+7.5V REG IC512
LM ON/OFF
MUTE SWITCH Q910
A.BUS
AUB.OUT
AU BUS CONTROL Q901-903
KEY.Y
KEY.X
KEY MATRIX S701-705, 751 (DECK A) S801-809 (DECK B)
A.REV
A.FWD
DUB.H
CD.SYNC
B.REV
B.FWD
B.PAU
B.REC
D701, 702 (DECK A) D801-806 (DECK B)
MOTOR DRIVE IC301 (1/2)
ARM1
ARM2
ARM3
IN 1A
IN 2A
IN 3A
OUT-A
M101A (REEL)
H/L
DUBBING SPEED CONTROL Q905, 906
RV71A TAPE SPEED (NORMAL)
RV72A TAPE SPEED (HIGH)
D902
A.CM
MOTOR DRIVE Q601
Q71A SPEED CONTROL
M102A (CAPSTAN)
-7.5V
DECK A
D903
RV71B TAPE SPEED (NORMAL)
RV72B TAPE SPEED (HIGH)
B.CM
MOTOR DRIVE Q602
Q71B SPEED CONTROL
M102B (CAPSTAN)
-7.5V
DECK B
MOTOR DRIVE IC301 (2/2)
BRM1
BRM2
BRM3
IN 1B
IN 2B
IN 3B
OUT-B
M101B (REEL)
● SIGNAL PATH
PB (DECK A)
PB (DECK B)
REC (DECK B)

R-CH SAME AS L-CH.

05

5-3. PRINTED WIRING BOARDS

- **Semiconductor Location**

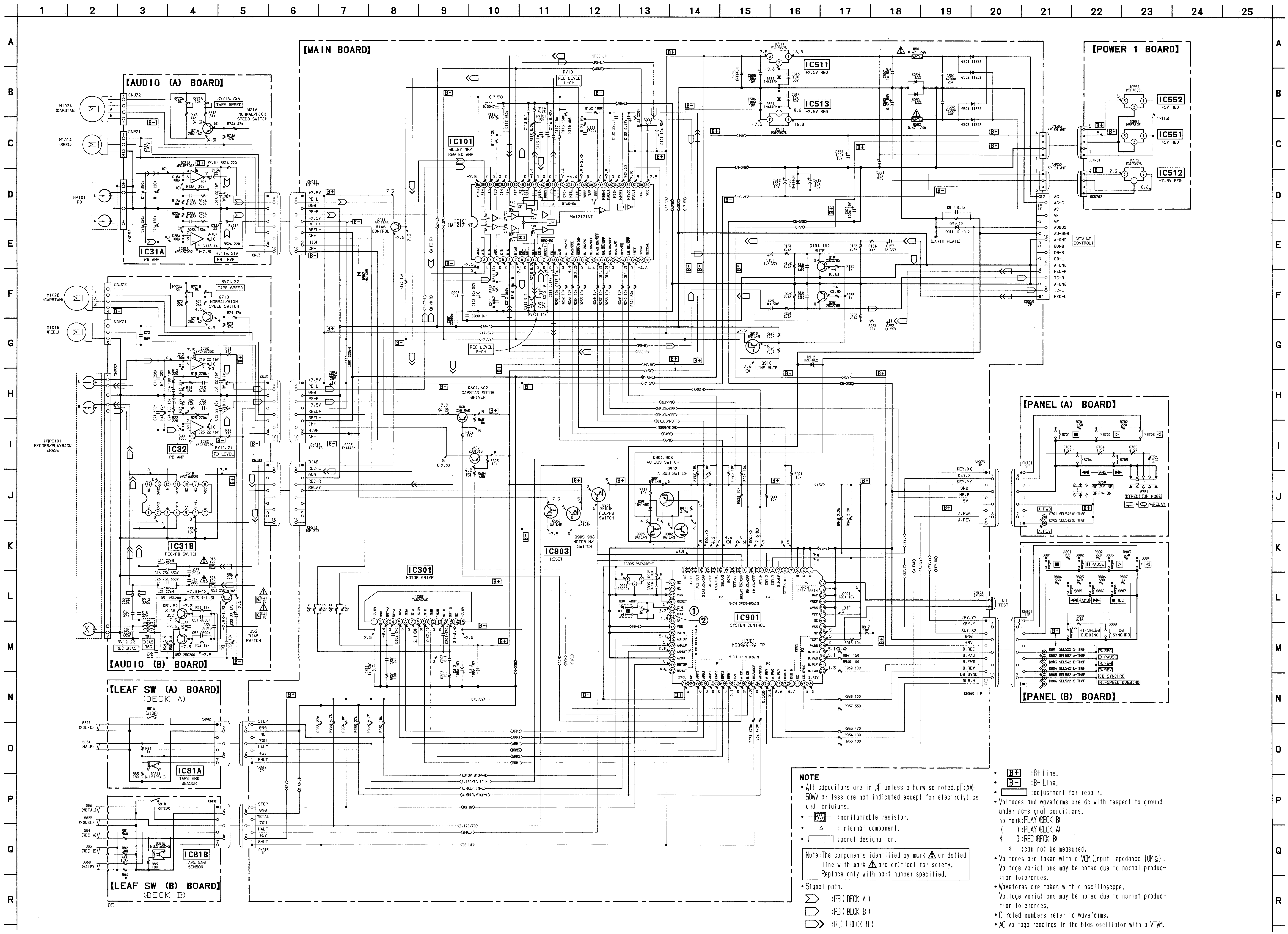
Ref. No.	Location
D501	G-27
D502	G-27
D503	G-27
D504	G-27
D582	H-26
D584	H-26
D586	I-25
D701	H-10
D702	H-11
D801	C-10
D802	C-11
D803	D-10
D804	D-11
D805	B-10
D806	B-10
D901	G-23
D902	H-20
D903	D-22
D904	H-27
D905	H-27
D911	F-26
D912	F-26
IC31A	G-15
IC31B	G-3
IC32	G-5
IC81A	C-16
IC81B	C-6
IC101	D-25
IC301	D-22
IC511	G-26
IC512	J-25
IC513	H-25
IC551	J-28
IC552	J-26
IC901	H-22
IC903	G-23
Q51	F-5
Q52	E-5
Q53	F-4
Q71A	G-16
Q81B	G-6
Q101	B-26
Q201	B-27
Q601	F-22
Q602	E-22
Q901	G-23
Q902	F-23
Q903	G-23
Q904	H-23
Q905	E-22
Q906	E-22
Q910	G-23
Q911	C-22

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
A B C D E F G H I J
【LEAF SW (B) BOARD】(DECK B)
S83 METAL
S86B HALF
S82B TOUEQ
S85 REC-B
【AUDIO (B) BOARD】(DECK B)
BLK
(CHASSIS)
WHT
RED
M101 B (REEL MOTOR)
M102 B (CAPSTAN MOTOR)
HRPE101 RECORD/PLAYBACK/ERASE HEAD
CNJ32
BRN
ORG
BLK
BLU
YEL
WHT
RED
CNJ33
1-650-299-
【PANEL (B) BOARD】(DECK B)
1-655-023-
【PANEL (A) BOARD】(DECK A)
1-655-022-
HP101 PLAYBACK HEAD
YEL
WHT
RED
BLK
【LEAF SW (A) BOARD】(DECK A)
S86A HALF
S82A TOUEQ
【AUDIO (A) BOARD】(DECK A)
(CHASSIS)
RED
WHT
M101A REEL MOTOR
M102A CAPSTAN MOTOR
1-651-268-
【MAIN BOARD】
CN913
CN914
SYSTEM CONTROL 1
1-655-024-
(CHASSIS)
【POWER 1 BOARD】
1-655-415-

Note:

- ●—— : parts extracted from the component side.
- ○–●–○ ⏚ : Jumper wire connected to the ground pattern on the component side.
- △ : internal component.

5-4. SCHEMATIC DIAGRAM


【AUDIO (A) BOARD】
【AUDIO (B) BOARD】
【MAIN BOARD】
【POWER 1 BOARD】
【PANEL (A) BOARD】
【PANEL (B) BOARD】
【LEAF SW (A) BOARD】
(DECK A)
【LEAF SW (B) BOARD】
(DECK B)
IC31A
PB AMP
IC32
PB AMP
IC31B
REC/PB SWITCH
IC101
DOLBY NR/ REC EQ AMP
IC301
MOTOR DRIVE
IC901
SYSTEM CONTROL
IC903
RESET
IC511
+7.5V REG
IC513
-7.5V REG
IC552
+5V REG
IC551
+5V REG
IC512
-7.5V REG
IC81A
TAPE END SENSOR
IC81B
TAPE END SENSOR
M102A (CAPSTAN)
M101A (REEL)
M102B (CAPSTAN)
M101B (REEL)
HP101 PB
HRPE101 RECORD/PLAYBACK ERASE
Q601, 602 CAPSTAN MOTOR DRIVER
Q910 LINE MUTE
Q101, 102 MUTE
Q901, 903 AU BUS SWITCH
Q902 A BUS SWITCH
Q905, 906 MOTOR H/L SWITCH
Q904 REC/PB SWITCH
Q611 BIAS CONTROL
RV101 REC LEVEL L-CH
RV201 REC LEVEL R-CH
SYSTEM CONTROL
EARTH PLATE
FOR TEST
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R

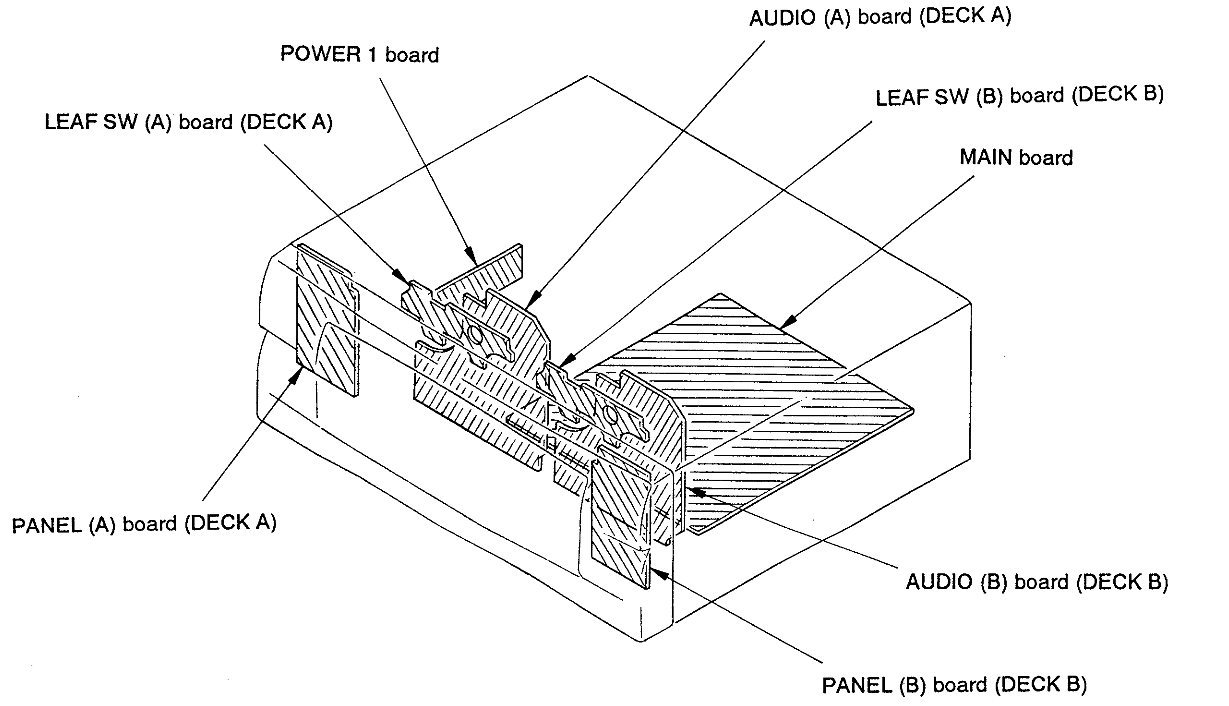
NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- ⊡ :nonflammable resistor.
- △ :internal component.
- ▭ :panel designation.

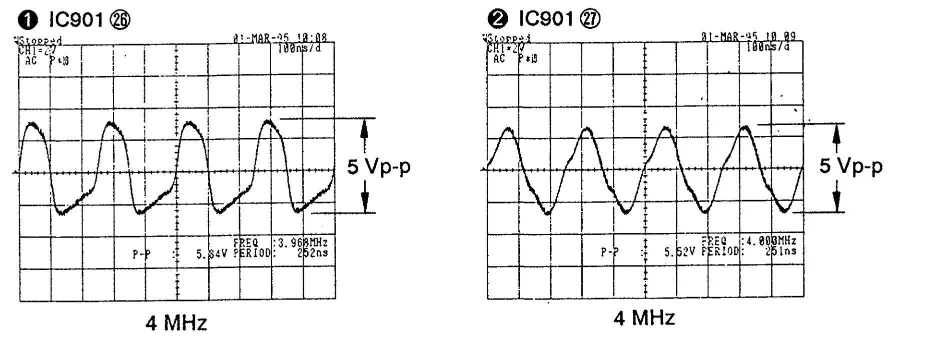
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- Signal path.
  - ⋗ :PB (DECK A)
  - ▷ :PB (DECK B)
  - ▷» :REC (DECK B)
- B+ :B+ Line.
- B− :B− Line.
- ▭ :adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: PLAY (DECK B)
  ( ) : PLAY (DECK A)
  《 》: REC (DECK B)
  * :can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normat production tolerances.
- Circled numbers refer to waveforms.
- AC voltage readings in the bias oscillator with a VTVM.

- **Circuit Boards Location**

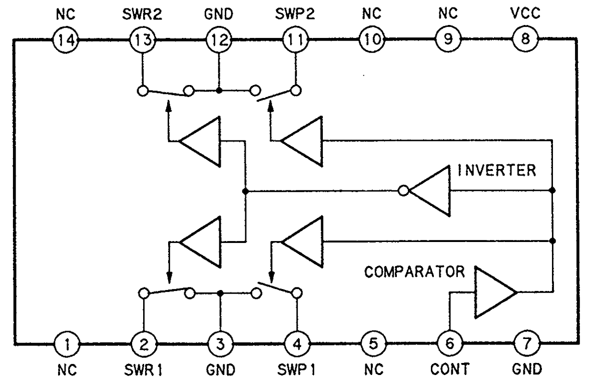

POWER 1 board
AUDIO (A) board (DECK A)
LEAF SW (A) board (DECK A)
LEAF SW (B) board (DECK B)
MAIN board
PANEL (A) board (DECK A)
AUDIO (B) board (DECK B)
PANEL (B) board (DECK B)

- **Waveforms (MAIN BOARD)**

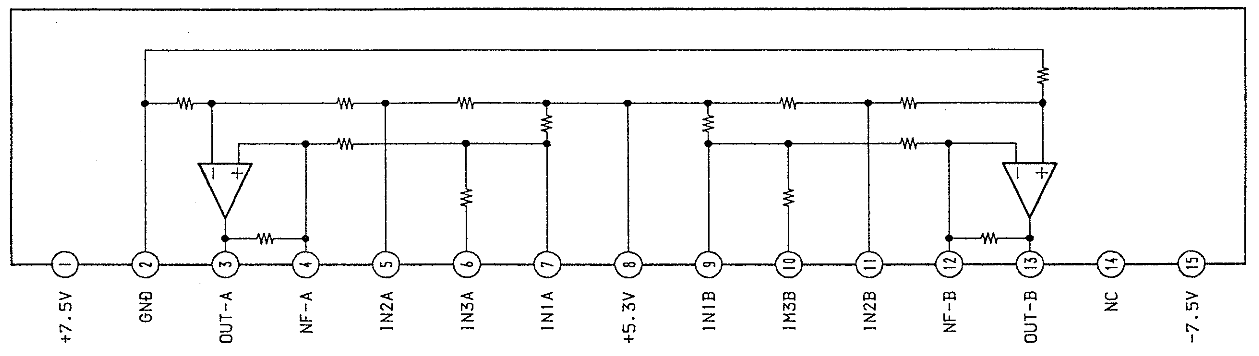


- **IC Block Diagrams**

IC31B μPC1330GR (AUDIO (B) BOARD)


NC
SWR2
GND
SWP2
NC
NC
VCC
14
13
12
11
10
9
8
INVERTER
COMPARATOR
1
2
3
4
5
6
7
NC
SWR1
GND
SWP1
NC
CONT
GND

IC301 TA8242AK (MAIN BOARD)

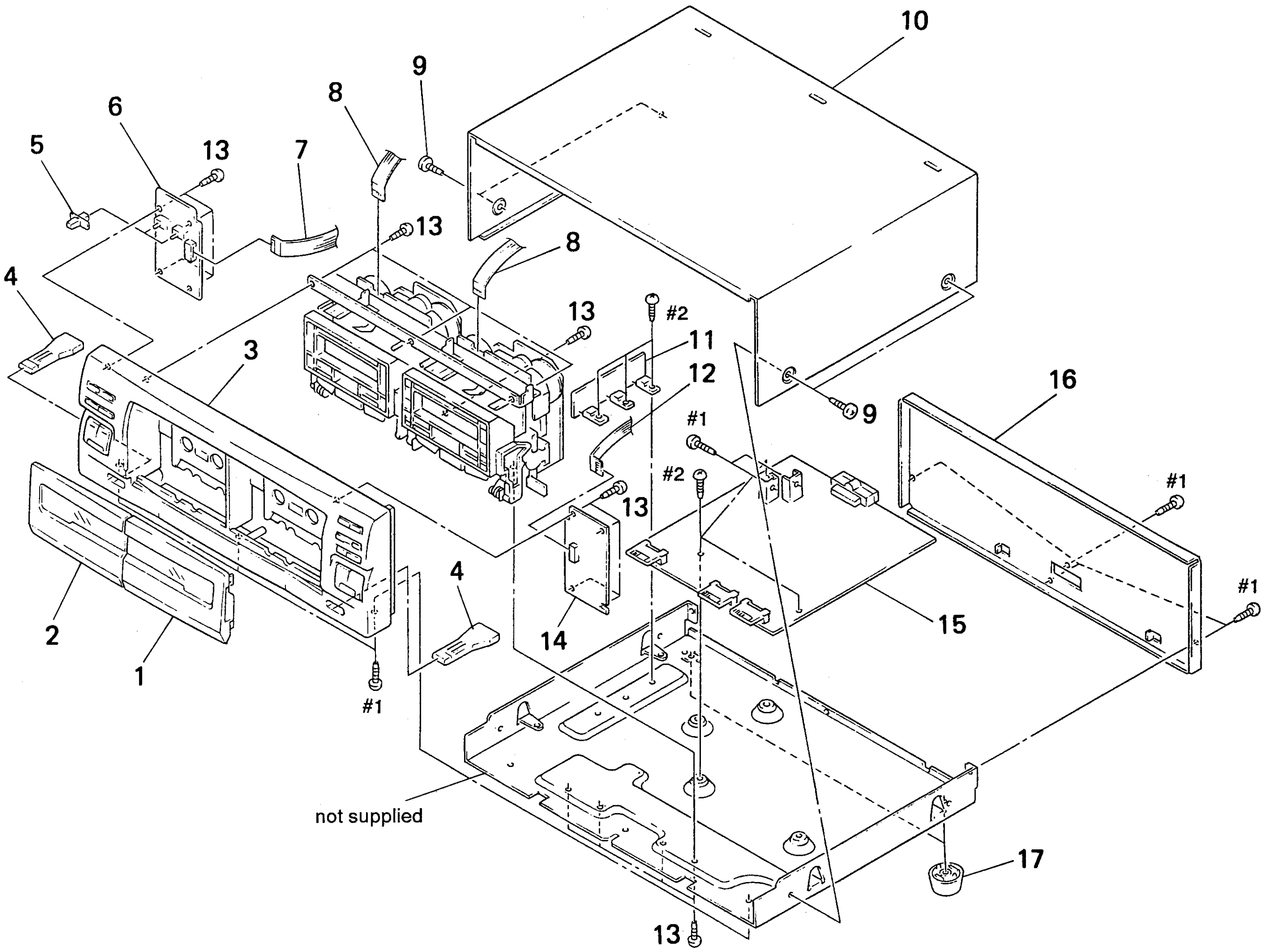

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
+7.5V
GND
OUT-A
NF-A
IN2A
IN3A
IN1A
+5.3V
IN1B
IN3B
IN2B
NF-B
OUT-B
NC
-7.5V

SECTION 6
EXPLODED VIEWS

NOTE:

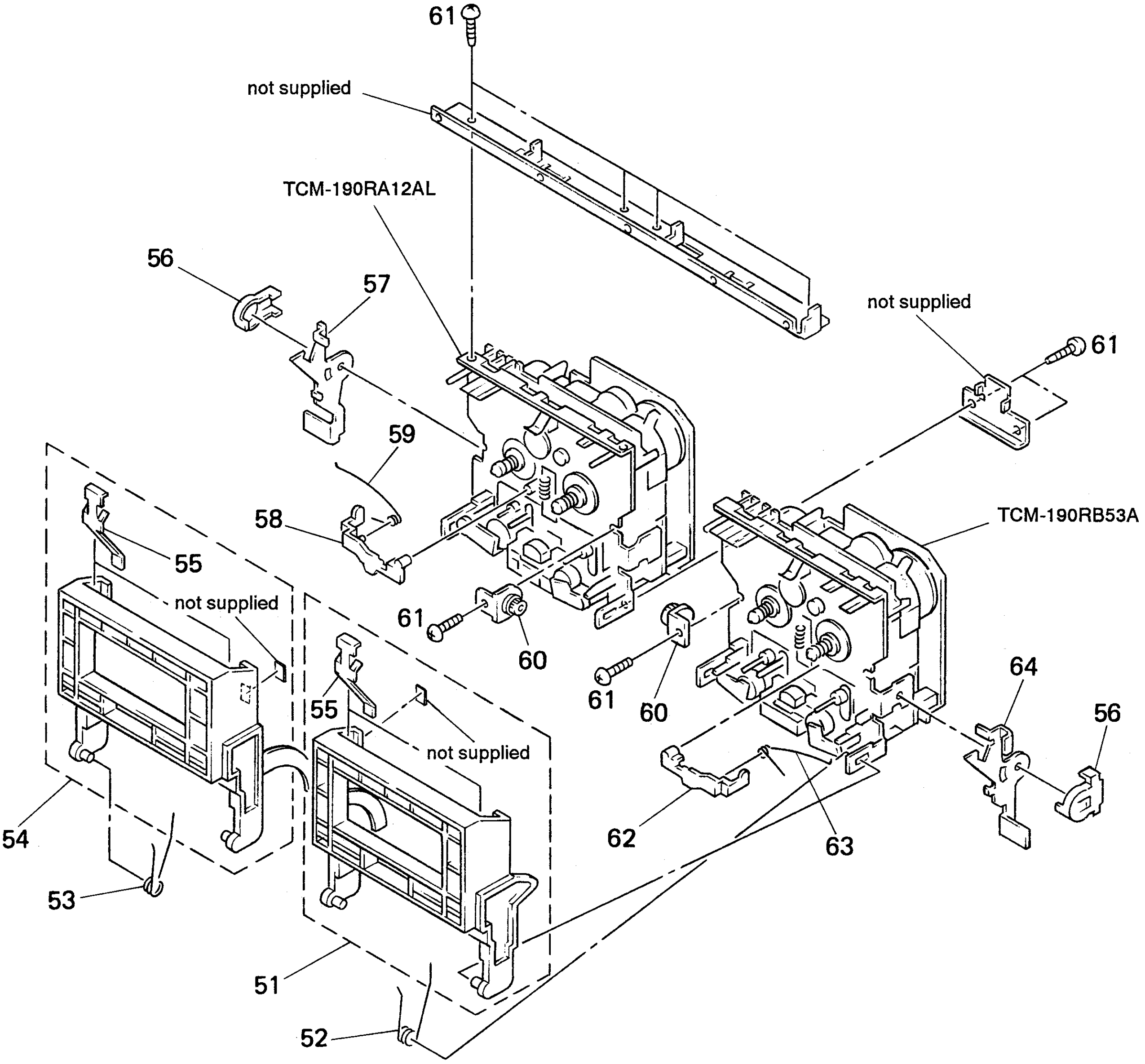
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.
- Abbreviation
  IT : Italian
  G : German
  AR : Argentine
  SP : Singapore
  MY : Malaysia
  EE : East European
  AU : Australian
  EA : Saudi Arabia
  MX : Mexican

(1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	X-3369-643-1	LID (B DECK) ASSY, CASSETTE	
2	X-3369-642-1	LID (A DECK) ASSY, CASSETTE	
3	X-3369-668-1	PANEL ASSY, FRONT	
4	3-918-281-01	BUTTON (EJECT)	
5	4-962-707-01	KNOB, SLIDE	
* 6	1-655-022-13	PANEL (A) BOARD	
7	1-769-664-11	WIRE (FLAT TYPE) (9 CORE)	
8	1-590-574-11	WIRE, FLAT TYPE (7 CORE)	
9	3-363-099-01	SCREW (CASE 3 TP2)	
10	4-969-778-31	CASE	
* 11	1-655-415-13	POWER 1 BOARD	
12	1-590-488-11	WIRE, FLAT TYPE (11 CORE)	
13	4-951-620-01	SCREW (2.6X8), +BVTP	
* 14	1-655-023-13	PANEL (B) BOARD	
* 15	A-2007-332-A	MAIN BOARD, COMPLETE	
* 16	3-918-326-01	PANEL, BACK (AEP, UK, IT, G)	
* 16	3-918-326-11	PANEL, BACK (E, AR, SP, MY, EE)	
* 16	3-918-326-21	PANEL, BACK (AU, EA, PX, MX)	
17	X-4941-228-1	FOOT ASSY	

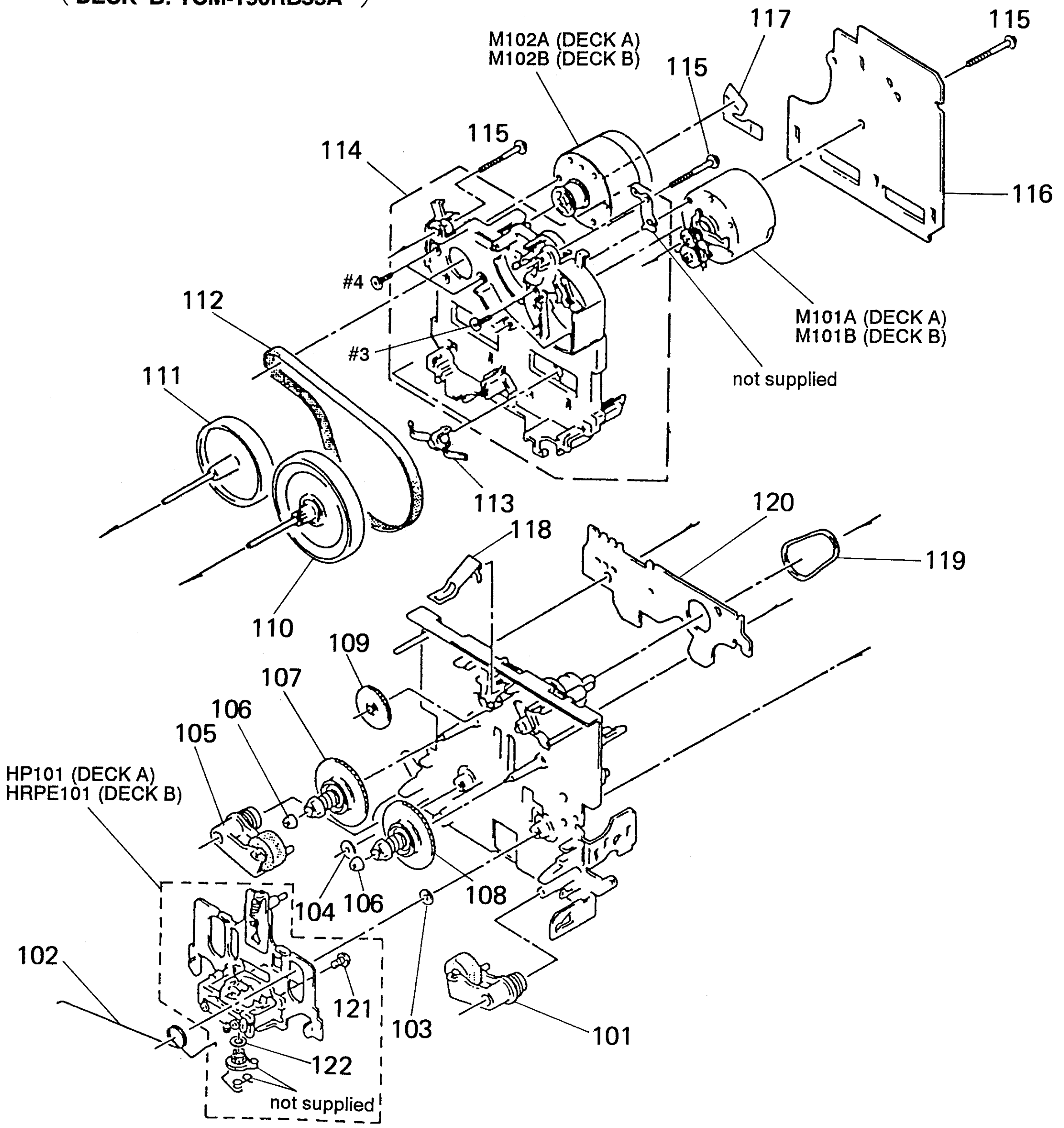
(2) MECHANISM DECK CHASSIS SECTION


61
not supplied
TCM-190RA12AL
56
57
59
58
55
not supplied
61
60
54
53
55
not supplied
51
52
not supplied
61
TCM-190RB53A
61
60
64
56
62
63

Ref. No.	Part No.	Description	Remark
51	A-4325-164-A	HOLDER (R) ASSY, CASSETTE	
52	3-354-960-01	SPRING (LOADING R), TORSION	
53	3-354-959-01	SPRING (LOADING L), TORSION	
54	A-4325-163-A	HOLDER (L) ASSY, CASSETTE	
55	3-308-823-11	DETENT, CASSETTE	
56	3-354-957-01	JOINT (LOCK LEVER)	
* 57	3-354-953-01	LEVER (LOCK LEVER L)	
58	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
59	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
60	3-354-963-01	DAMPER	
61	4-951-620-01	SCREW (2.6X8), +BVTP	
62	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
63	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
* 64	3-354-954-01	LEVER (LOCK LEVER R)	

(3) MECHANISM DECK SECTION-1

(DECK A: TCM-190RA12AL
DECK B: TCM-190RB53A)

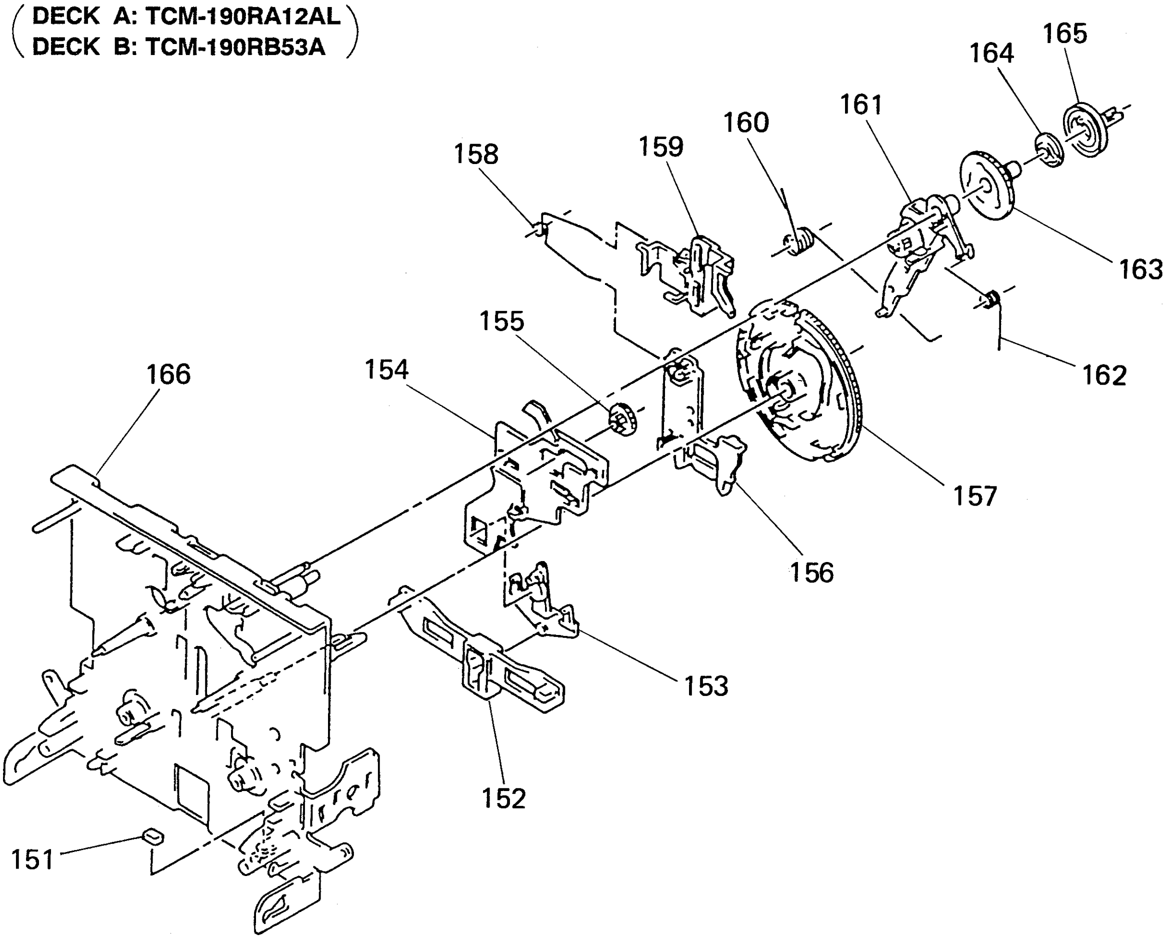

M102A (DECK A)
M102B (DECK B)
117
115
115
115
114
116
#4
112
#3
111
M101A (DECK A)
M101B (DECK B)
not supplied
113
120
118
119
110
109
107
106
105
HP101 (DECK A)
HRPE101 (DECK B)
104
106
108
102
121
103
101
122
not supplied

Ref. No.	Part No.	Description	Remark
101	X-3366-047-1	LEVER (PINCH F) ASSY	
102	3-907-362-01	SPRING, TORSION	
103	3-356-713-01	WASHER	
104	3-356-714-01	WASHER	
105	X-3366-048-1	LEVER (PINCH R) ASSY	
106	3-362-308-01	CAP (REEL)	
107	X-3366-971-1	TABLE ASSY (B), REEL	
108	X-3366-970-1	TABLE ASSY, REEL	
109	3-359-424-01	GEAR (REV GEAR)	
110	X-3367-629-1	FLYWHEEL (FWD) ASSY	
111	X-3359-410-1	FLYWHEEL (REV) ASSY (DECK A)	
111	X-3367-630-1	FLYWHEEL (REV) ASSY (DECK B)	
112	3-359-417-01	BELT (FLAT), CAPSTAN	
113	3-575-321-00	RETAINER, THRUST, CAPSTAN	
114	3-359-436-11	BASE (THRUST RETAINER), FITTING	
115	3-359-414-01	SCREW (+PTPWH 2X23)	

Ref. No.	Part No.	Description	Remark
* 116	A-2007-134-A	AUDIO BOARD, COMPLETE (DECK B)	
* 116	A-2007-266-A	AUDIO BOARD, COMPLETE (DECK A)	
117	1-638-983-11	MOTOR FLEXIBLE BOARD	
118	3-359-430-01	SPRING (CASSETTE RETAINER), LEAF	
119	3-359-466-01	BELT (FR), SQUARE	
* 120	1-638-020-11	LEAF SW BOARD (DECK A)	
* 120	1-638-020-11	LEAF SW BOARD (DECK B)	
121	3-388-848-01	SCREW (P2X6) (B TIGHT)	
122	3-701-440-11	WASHER, 3.5 (DECK B)	
122	3-701-440-21	WASHER, 3.5 (DECK A)	
HP101	A-2003-757-A	BASE ASSY, HEAD (DECK A)	
HRPE101	A-2003-930-A	BASE ASSY, HEAD (DECK B)	
M101A	X-3363-501-2	MOTOR ASSY (REEL) (DECK A)	
M101B	X-3363-501-2	MOTOR ASSY (REEL) (DECK B)	
M102A	X-3365-377-2	MOTOR ASSY (CAPSTAN) (DECK A)	
M102B	X-3365-377-2	MOTOR ASSY (CAPSTAN) (DECK B)	

(4) MECHANISM DECK SECTION-2

(DECK A: TCM-190RA12AL
DECK B: TCM-190RB53A)



Ref. No.	Part No.	Description	Remark
151	3-359-469-01	SPACER	
152	3-359-425-01	SLIDER (REVERSE SLIDER)	
153	3-359-426-01	LEVER (REVERSE LEVER)	
* 154	3-359-415-01	SLIDER (TRIGGER SLIDER) (DECK A)	
* 154	3-359-415-11	SLIDER (TRIGGER SLIDER) (DECK B)	
155	3-359-448-01	GEAR (TRIGGER)	
156	3-359-427-01	SLIDER (LEVERSE SLIDER)	
157	3-359-420-01	GEAR (CAM GEAR)	
158	3-359-454-01	SPRING, TORSION	
159	3-359-429-01	SLIDER (BRAKE PLATE) (DECK A)	
159	3-359-429-11	SLIDER (BRAKE PLATE) (DECK B)	
160	3-359-456-01	SPRING(TRIGGER SPRING), TORSION	
161	X-3366-569-1	ARM ASSY, FR	
162	3-924-185-11	SPRING (FR ARM), TORSION	
163	3-359-419-11	GEAR (FR GEAR)	
164	3-359-421-01	CLUTCH (REEL DISK)	
165	3-359-418-01	PULLEY (FR PULLEY)	
166	X-3359-415-1	CHASSIS ASSY, MECHANICAL (DECK A)	
166	X-3363-790-1	CHASSIS ASSY, MECHANICAL (DECK B)	

SECTION 7
ELECTRICAL PARTS LIST

AUDIO (A) **AUDIO (B)**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-2007-266-A	AUDIO (A) BOARD, COMPLETE (DECK A)			
		*********************************			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C72	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
		< CONNECTOR >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
CNJ72	1-764-902-11	CONNECTOR, FFC/FPC 4P			
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
IC31A	8-759-106-02	IC uPC4570G2			
		< JUMPER RESISTOR >			
JW1	1-216-295-00	CONDUCTOR, CHIP			
JW51	1-216-296-00	METAL CHIP	0	5%	1/8W
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W
		< TRANSISTOR >			
Q71A	8-729-216-22	TRANSISTOR 2SA1162			
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL GLAZE	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL GLAZE	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W
R807	1-249-417-11	CARBON	1K	5%	1/4W
R808	1-249-426-11	CARBON	5.6K	5%	1/4W
		< VARIABLE RESISTOR >			
RV11A	1-241-761-11	RES, ADJ, CARBON 1K			
RV21A	1-241-761-11	RES, ADJ, CARBON 1K			
RV71A	1-241-630-11	RES, ADJ, CARBON 10K			
RV72A	1-241-630-11	RES, ADJ, CARBON 10K			
**					
*	A-2007-134-A	AUDIO (B) BOARD, COMPLETE (DECK B)			
		*********************************			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C13	1-136-153-00	FILM	0.01uF	5%	50V
C14	1-126-177-11	ELECT	100uF	20%	10V
C15	1-124-234-00	ELECT	22uF	20%	16V
C16	1-136-273-00	FILM	75PF	5%	630V
C17	1-164-080-11	CERAMIC	390PF	10%	50V
C18	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C23	1-136-153-00	FILM	0.01uF	5%	50V
C24	1-126-177-11	ELECT	100uF	20%	10V
C25	1-124-234-00	ELECT	22uF	20%	16V
C26	1-136-273-00	FILM	75PF	5%	630V
C27	1-164-080-11	CERAMIC	390PF	10%	50V

AUDIO (B)

Ref. No.	Part No.	Description			Remark
C28	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C52	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C53	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C54	1-136-559-11	FILM	0.0047uF	5%	630V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C58	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C72	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
		< CONNECTOR >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD			
CNJ72	1-764-902-11	CONNECTOR, FFC/FPC 4P			
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
IC31B	8-759-249-21	IC	uPC1330GR		
IC32	8-759-106-02	IC	uPC4570G2		
		< JUMPER RESISTOR >			
JW1	1-216-295-00	CONDUCTOR, CHIP			
JW2	1-216-295-00	CONDUCTOR, CHIP			
JW11	1-216-296-00	METAL CHIP	0	5%	1/8W
JW12	1-216-296-00	METAL CHIP	0	5%	1/8W
JW13	1-216-296-00	METAL CHIP	0	5%	1/8W
JW14	1-216-296-00	METAL CHIP	0	5%	1/8W
JW15	1-216-296-00	METAL CHIP	0	5%	1/8W
JW16	1-216-296-00	METAL CHIP	0	5%	1/8W
JW17	1-216-296-00	METAL CHIP	0	5%	1/8W
JW18	1-216-296-00	METAL CHIP	0	5%	1/8W
JW19	1-216-296-00	METAL CHIP	0	5%	1/8W
JW20	1-216-296-00	METAL CHIP	0	5%	1/8W
JW21	1-216-296-00	METAL CHIP	0	5%	1/8W
JW22	1-216-296-00	METAL CHIP	0	5%	1/8W
JW23	1-216-296-00	METAL CHIP	0	5%	1/8W
JW24	1-216-296-00	METAL CHIP	0	5%	1/8W
JW25	1-216-296-00	METAL CHIP	0	5%	1/8W
JW26	1-216-296-00	METAL CHIP	0	5%	1/8W
JW27	1-216-296-00	METAL CHIP	0	5%	1/8W
		< COIL >			
L11	1-410-780-11	INDUCTOR	27uH		
L21	1-410-780-11	INDUCTOR	27uH		

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q51	8-729-142-46	TRANSISTOR	2SC2001-LK		
Q52	8-729-142-46	TRANSISTOR	2SC2001-LK		
Q53	8-729-111-29	TRANSISTOR	2SD1616A-K		
Q71B	8-729-216-22	TRANSISTOR	2SA1162		
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-033-00	METAL CHIP	220	5%	1/10W
R13	1-216-081-00	METAL CHIP	22K	5%	1/10W
R14	1-216-075-00	METAL CHIP	12K	5%	1/10W
R15	1-216-107-00	METAL CHIP	270K	5%	1/10W
⚠R16	1-249-430-11	CARBON	12K	5%	1/4W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-033-00	METAL CHIP	220	5%	1/10W
R23	1-216-081-00	METAL CHIP	22K	5%	1/10W
R24	1-216-075-00	METAL CHIP	12K	5%	1/10W
R25	1-216-107-00	METAL CHIP	270K	5%	1/10W
⚠R26	1-249-430-11	CARBON	12K	5%	1/4W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R33	1-216-073-00	METAL CHIP	10K	5%	1/10W
⚠R41	1-249-393-11	CARBON	10	5%	1/4W
⚠R42	1-249-393-11	CARBON	10	5%	1/4W
R51	1-216-075-00	METAL CHIP	12K	5%	1/10W
R52	1-216-075-00	METAL CHIP	12K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11B	1-241-761-11	RES, ADJ, CARBON	1K		
RV12	1-238-551-11	RES, ADJ, CARBON	220K		
RV21B	1-241-761-11	RES, ADJ, CARBON	1K		
RV22	1-238-551-11	RES, ADJ, CARBON	220K		
RV71B	1-241-630-11	RES, ADJ, CARBON	10K		
RV72B	1-241-630-11	RES, ADJ, CARBON	10K		
		< TRANSFORMER >			
T51	1-406-419-11	COIL, BIAS OSCILLATION			

****

The components identified by
mark ⚠ or dotted line with mark.
⚠ are critical for safety.
Replace only with part number
specified.

Ref. No.	Part No.	Description	Remark
*	1-638-020-11	LEAF SW (A) BOARD (DECK A)	
		**************************	
		< CONNECTOR >	
* CNP81	1-568-850-11	SOCKET, CONNECTOR 7P	
		< IC >	
IC81A	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(H1)	
		< RESISTOR >	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S81A	1-571-958-11	SWITCH, PUSH (1 KEY)(STOP)	
S82A	1-571-281-21	SWITCH, LEAF (70 UEQ)	
S86A	1-571-281-21	SWITCH, LEAF (HALF)	
**			
*	1-638-020-11	LEAF SW (B) BOARD (DECK B)	
		**************************	
		< CONNECTOR >	
* CNP81	1-568-850-11	SOCKET, CONNECTOR 7P	
		< IC >	
IC81B	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(H1)	
		< RESISTOR >	
R81	1-249-414-11	CARBON 560 5% 1/4W	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S81B	1-571-958-11	SWITCH, PUSH (1 KEY)(STOP)	
S82B	1-571-281-21	SWITCH, LEAF (70 UEQ)	
S83B	1-571-281-21	SWITCH, LEAF (METAL)	
S84	1-571-281-21	SWITCH, LEAF (REC-A)	
S85	1-571-281-21	SWITCH, LEAF (REC-B)	
S86B	1-571-281-21	SWITCH, LEAF (HALF)	
**			

Ref. No.	Part No.	Description	Remark
*	A-2007-332-A	MAIN BOARD, COMPLETE	
		*******************	
	1-537-770-11	TERMINAL BOARD, GROUND	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
		< CAPACITOR >	
C101	1-124-907-11	ELECT 10uF 20% 50V	
C102	1-124-907-11	ELECT 10uF 20% 50V	
C111	1-137-368-11	FILM 0.0047uF 5% 50V	
C112	1-162-291-31	CERAMIC 560PF 10% 50V	
C113	1-137-399-11	FILM 0.1uF 5% 50V	
C115	1-124-903-11	ELECT 1uF 20% 50V	
C116	1-124-902-00	ELECT 0.47uF 20% 50V	
C117	1-124-907-11	ELECT 10uF 20% 50V	
C131	1-162-600-11	CERAMIC 0.0047uF 20% 16V	
C132	1-162-302-11	CERAMIC 0.0022uF 20% 16V	
C133	1-124-902-00	ELECT 0.47uF 20% 50V	
C151	1-124-907-11	ELECT 10uF 20% 50V	
C152	1-162-286-31	CERAMIC 220PF 10% 50V	
C153	1-124-903-11	ELECT 1uF 20% 50V	
C211	1-137-368-11	FILM 0.0047uF 5% 50V	
C212	1-162-291-31	CERAMIC 560PF 10% 50V	
C213	1-137-399-11	FILM 0.1uF 5% 50V	
C215	1-124-903-11	ELECT 1uF 20% 50V	
C216	1-124-902-00	ELECT 0.47uF 20% 50V	
C217	1-124-907-11	ELECT 10uF 20% 50V	
C251	1-124-907-11	ELECT 10uF 20% 50V	
C252	1-162-286-31	CERAMIC 220PF 10% 50V	
C253	1-124-903-11	ELECT 1uF 20% 50V	
C301	1-164-159-11	CERAMIC 0.1uF 50V	
C302	1-162-290-31	CERAMIC 470PF 10% 50V	
C303	1-164-159-11	CERAMIC 0.1uF 50V	
C304	1-162-290-31	CERAMIC 470PF 10% 50V	
C311	1-124-903-11	ELECT 1uF 20% 50V	
C312	1-124-443-00	ELECT 100uF 20% 10V	
C313	1-124-443-00	ELECT 100uF 20% 10V	
C501	1-124-564-11	ELECT 4700uF 20% 25V	
C502	1-124-564-11	ELECT 4700uF 20% 25V	
C505	1-124-443-00	ELECT 100uF 20% 10V	
C506	1-124-443-00	ELECT 100uF 20% 10V	
C507	1-124-903-11	ELECT 1uF 20% 50V	
C508	1-124-902-00	ELECT 0.47uF 20% 50V	
C511	1-124-443-00	ELECT 100uF 20% 10V	
C512	1-124-443-00	ELECT 100uF 20% 10V	
C513	1-124-907-11	ELECT 10uF 20% 50V	
C514	1-124-907-11	ELECT 10uF 20% 50V	
C515	1-124-907-11	ELECT 10uF 20% 50V	
C551	1-124-907-11	ELECT 10uF 20% 50V	

MAIN

Ref. No.	Part No.	Description	Remark
C552	1-124-443-00	ELECT 100uF 20% 10V	
C901	1-124-584-00	ELECT 100uF 20% 10V	
C903	1-124-120-11	ELECT 220uF 20% 25V	
C911	1-164-159-11	CERAMIC 0.1uF 50V	
C990	1-164-159-11	CERAMIC 0.1uF 50V	
C991	1-161-494-00	CERAMIC 0.022uF 25V	
C992	1-164-159-11	CERAMIC 0.1uF 50V	
C993	1-164-159-11	CERAMIC 0.1uF 50V	
C994	1-161-494-00	CERAMIC 0.022uF 25V	
C995	1-164-159-11	CERAMIC 0.1uF 50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN502	1-564-506-11	PLUG, CONNECTOR 3P	
* CN503	1-564-507-11	PLUG, CONNECTOR 4P	
* CN902	1-560-060-00	PIN, CONNECTOR 2P	
* CN911	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN912	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN913	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN914	1-568-826-11	SOCKET, CONNECTOR 7P	
* CN915	1-568-826-11	SOCKET, CONNECTOR 7P	
CN950	1-764-017-11	HOUSING, CONNECTOR (PC BOARD) 17P	
* CN970	1-568-828-11	SOCKET, CONNECTOR 9P	
* CN980	1-568-830-11	SOCKET, CONNECTOR 11P	

< DIODE >

Ref. No.	Part No.	Description	Remark
D501	8-719-024-99	DIODE 11ES2-NTA2B	
D502	8-719-024-99	DIODE 11ES2-NTA2B	
D503	8-719-024-99	DIODE 11ES2-NTA2B	
D504	8-719-024-99	DIODE 11ES2-NTA2B	
D505	8-719-987-63	DIODE 1N4148M	
D582	8-719-987-63	DIODE 1N4148M	
D584	8-719-987-63	DIODE 1N4148M	
D586	8-719-987-63	DIODE 1N4148M	
D901	8-719-987-63	DIODE 1N4148M	
D902	8-719-987-63	DIODE 1N4148M	
D903	8-719-987-63	DIODE 1N4148M	
D904	8-719-024-99	DIODE 11ES2-NTA2B	
D905	8-719-024-99	DIODE 11ES2-NTA2B	
D911	8-719-933-54	DIODE HZS9A2L	
D912	8-719-933-54	DIODE HZS9A2L	

< IC >

Ref. No.	Part No.	Description	Remark
IC101	8-759-098-75	IC HA12171NT	
IC301	8-759-266-35	IC TA8242AK	
IC511	8-759-604-86	IC M5F7807	
IC513	8-759-604-90	IC M5F7907	
IC901	8-759-250-60	IC M50964-261FP	
IC903	8-759-165-82	IC PST600E-T	

< COIL >

Ref. No.	Part No.	Description	Remark
L991	1-410-525-11	INDUCTOR 220uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q601	8-729-116-56	TRANSISTOR 2SB1068-L	
Q602	8-729-116-56	TRANSISTOR 2SB1068-L	
Q901	8-729-900-65	TRANSISTOR DTA144ES	
Q902	8-729-900-89	TRANSISTOR DTC144ES	
Q903	8-729-900-89	TRANSISTOR DTC144ES	
Q904	8-729-900-65	TRANSISTOR DTA144ES	
Q905	8-729-900-65	TRANSISTOR DTA144ES	
Q906	8-729-900-89	TRANSISTOR DTC144ES	
Q910	8-729-900-65	TRANSISTOR DTA144ES	
Q911	8-729-119-78	TRANSISTOR 2SC2785-HFE	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R111	1-249-430-11	CARBON 12K 5% 1/4W	
R112	1-249-431-11	CARBON 15K 5% 1/4W	
R113	1-249-428-11	CARBON 8.2K 5% 1/4W	
R114	1-249-425-11	CARBON 4.7K 5% 1/4W	
R115	1-247-883-00	CARBON 150K 5% 1/4W	
R116	1-247-868-11	CARBON 36K 5% 1/4W	
R120	1-249-431-11	CARBON 15K 5% 1/4W	
R131	1-249-431-11	CARBON 15K 5% 1/4W	
R132	1-249-441-11	CARBON 100K 5% 1/4W	
R133	1-247-887-00	CARBON 220K 5% 1/4W	
R151	1-249-421-11	CARBON 2.2K 5% 1/4W	
R152	1-249-428-11	CARBON 8.2K 5% 1/4W	
R153	1-247-840-00	CARBON 2.4K 5% 1/4W	
R154	1-249-433-11	CARBON 22K 5% 1/4W	
R155	1-249-417-11	CARBON 1K 5% 1/4W	
R210	1-215-451-00	METAL 18K 1% 1/4W	
R211	1-249-430-11	CARBON 12K 5% 1/4W	
R212	1-249-431-11	CARBON 15K 5% 1/4W	
R213	1-249-428-11	CARBON 8.2K 5% 1/4W	
R214	1-249-425-11	CARBON 4.7K 5% 1/4W	
R231	1-249-429-11	CARBON 10K 5% 1/4W	
R232	1-249-429-11	CARBON 10K 5% 1/4W	
R233	1-249-429-11	CARBON 10K 5% 1/4W	
R234	1-249-429-11	CARBON 10K 5% 1/4W	
R235	1-249-429-11	CARBON 10K 5% 1/4W	
R236	1-249-429-11	CARBON 10K 5% 1/4W	
R237	1-249-429-11	CARBON 10K 5% 1/4W	
R238	1-249-429-11	CARBON 10K 5% 1/4W	
R239	1-249-429-11	CARBON 10K 5% 1/4W	
R240	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R241	1-247-864-11	CARBON 24K 5% 1/4W	
R251	1-249-421-11	CARBON 2.2K 5% 1/4W	
R252	1-249-428-11	CARBON 8.2K 5% 1/4W	
R253	1-247-840-00	CARBON 2.4K 5% 1/4W	
R254	1-249-433-11	CARBON 22K 5% 1/4W	
R255	1-249-417-11	CARBON 1K 5% 1/4W	
R301	1-247-807-31	CARBON 100 5% 1/4W	
R302	1-247-807-31	CARBON 100 5% 1/4W	
R311	1-249-381-11	CARBON 1 5% 1/4W	
R312	1-249-381-11	CARBON 1 5% 1/4W	
R313	1-249-381-11	CARBON 1 5% 1/4W	
R314	1-249-381-11	CARBON 1 5% 1/4W	
⚠R501	1-217-371-00	FUSIBLE 0.47 10% 1/4W	
⚠R502	1-217-371-00	FUSIBLE 0.47 10% 1/4W	
R601	1-249-429-11	CARBON 10K 5% 1/4W	
R602	1-249-415-11	CARBON 680 5% 1/4W	
R603	1-249-429-11	CARBON 10K 5% 1/4W	
R604	1-249-415-11	CARBON 680 5% 1/4W	
R911	1-249-425-11	CARBON 4.7K 5% 1/4W	
R912	1-249-429-11	CARBON 10K 5% 1/4W	
R913	1-249-393-11	CARBON 10 5% 1/4W	
R915	1-249-429-11	CARBON 10K 5% 1/4W	
R916	1-247-903-00	CARBON 1M 5% 1/4W	
R917	1-249-429-11	CARBON 10K 5% 1/4W	
R918	1-249-429-11	CARBON 10K 5% 1/4W	
R919	1-249-441-11	CARBON 100K 5% 1/4W	
R920	1-249-441-11	CARBON 100K 5% 1/4W	
R921	1-249-429-11	CARBON 10K 5% 1/4W	
R922	1-249-429-11	CARBON 10K 5% 1/4W	
R923	1-249-429-11	CARBON 10K 5% 1/4W	
R924	1-249-429-11	CARBON 10K 5% 1/4W	
R925	1-249-429-11	CARBON 10K 5% 1/4W	
R926	1-249-429-11	CARBON 10K 5% 1/4W	
R927	1-249-429-11	CARBON 10K 5% 1/4W	
R931	1-247-895-00	CARBON 470K 5% 1/4W	
R932	1-247-895-00	CARBON 470K 5% 1/4W	
R933	1-247-807-31	CARBON 100 5% 1/4W	
R934	1-247-807-31	CARBON 100 5% 1/4W	
R935	1-249-413-11	CARBON 470 5% 1/4W	
R937	1-249-411-11	CARBON 330 5% 1/4W	
R938	1-247-807-31	CARBON 100 5% 1/4W	
R939	1-247-807-31	CARBON 100 5% 1/4W	
R940	1-247-807-31	CARBON 100 5% 1/4W	
R941	1-247-811-31	CARBON 150 5% 1/4W	
R942	1-249-421-11	CARBON 2.2K 5% 1/4W	
R943	1-249-421-11	CARBON 2.2K 5% 1/4W	
R951	1-249-429-11	CARBON 10K 5% 1/4W	
R952	1-249-425-11	CARBON 4.7K 5% 1/4W	
R953	1-249-434-11	CARBON 27K 5% 1/4W	
R954	1-249-429-11	CARBON 10K 5% 1/4W	
R955	1-249-425-11	CARBON 4.7K 5% 1/4W	
R956	1-249-434-11	CARBON 27K 5% 1/4W	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV101	1-238-600-11	RES, ADJ, CARBON 10K	
RV201	1-238-600-11	RES, ADJ, CARBON 10K	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X901	1-577-358-21	VIBRATOR, CERAMIC (4 MHz)	

****

* 1-655-022-13 PANEL (A) BOARD

****

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN701	1-568-852-11	SOCKET, CONNECTOR 9P	

< DIODE >

Ref. No.	Part No.	Description	Remark
D701	8-719-046-42	DIODE SEL5421E-TH8F	
D702	8-719-046-42	DIODE SEL5421E-TH8F	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R701	1-247-811-31	CARBON 150 5% 1/4W	
R702	1-249-409-11	CARBON 220 5% 1/4W	
R703	1-249-418-11	CARBON 1.2K 5% 1/4W	
R704	1-249-419-11	CARBON 1.5K 5% 1/4W	
R705	1-247-850-11	CARBON 6.2K 5% 1/4W	
R706	1-247-858-11	CARBON 13K 5% 1/4W	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S701	1-554-303-21	SWITCH, TACTILE (■)	
S702	1-554-303-21	SWITCH, TACTILE (▷)	
S703	1-554-303-21	SWITCH, TACTILE (◁)	
S704	1-554-303-21	SWITCH, TACTILE (◀◀)	
S705	1-554-303-21	SWITCH, TACTILE (▶▶)	
S750	1-571-298-11	SWITCH, SLIDE (DOLBY NR)	
S751	1-571-296-11	SWITCH, SLIDE (DIRECTION MODE)	

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

PANEL (B) POWER 1

Ref. No.	Part No.	Description	Remark
*	1-655-023-13	PANEL (B) BOARD	
		***************	
		< CONNECTOR >	
* CN801	1-568-854-11	SOCKET, CONNECTOR 11P	
		< DIODE >	
D801	8-719-046-46	DIODE SEL5221S-TH8F	
D802	8-719-046-38	DIODE SEL5821A-TH8F	
D803	8-719-046-42	DIODE SEL5421E-TH8F	
D804	8-719-046-42	DIODE SEL5421E-TH8F	
D805	8-719-046-38	DIODE SEL5821A-TH8F	
D806	8-719-046-46	DIODE SEL5221S-TH8F	
		< RESISTOR >	
R801	1-247-811-31	CARBON 150 5% 1/4W	
R802	1-249-409-11	CARBON 220 5% 1/4W	
R803	1-249-411-11	CARBON 330 5% 1/4W	
R804	1-249-411-11	CARBON 330 5% 1/4W	
R805	1-249-413-11	CARBON 470 5% 1/4W	
R806	1-249-415-11	CARBON 680 5% 1/4W	
R807	1-249-417-11	CARBON 1K 5% 1/4W	
R808	1-249-426-11	CARBON 5.6K 5% 1/4W	
		< SWITCH >	
S801	1-554-303-21	SWITCH, TACTILE (■)	
S802	1-554-303-21	SWITCH, TACTILE (❚❚)	
S803	1-554-303-21	SWITCH, TACTILE (▷)	
S804	1-554-303-21	SWITCH, TACTILE (◁)	
S805	1-554-303-21	SWITCH, TACTILE (◀◀)	
S806	1-554-303-21	SWITCH, TACTILE (▶▶)	
S807	1-554-303-21	SWITCH, TACTILE (● REC)	
S808	1-554-303-21	SWITCH, TACTILE (HI-SPEED DUBBING)	
S809	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)	

****

Ref. No.	Part No.	Description	Remark
*	1-655-415-13	POWER 1 BOARD	
		*************	
		< IC >	
IC512	8-759-604-90	IC M5F7907	
IC551	8-759-231-53	IC M5F7805	
IC552	8-759-231-53	IC M5F7805	

****

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		*************	
7	1-769-664-11	WIRE (FLAT TYPE) (9 CORE)	
8	1-590-574-11	WIRE, FLAT TYPE (7 CORE)	
12	1-590-488-11	WIRE, FLAT TYPE (11 CORE)	
HP101	A-2003-757-A	BASE ASSY, HEAD (DECK A)	
HRPE101	A-2003-930-A	BASE ASSY, HEAD (DECK B)	
M101A	X-3363-501-2	MOTOR ASSY (REEL) (DECK A)	
M101B	X-3363-501-2	MOTOR ASSY (REEL) (DECK B)	
M102A	X-3365-377-2	MOTOR ASSY (CAPSTAN) (DECK A)	
M102B	X-3365-377-2	MOTOR ASSY (CAPSTAN) (DECK B)	

****

****

HARDWARE LIST

****

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-682-548-04	SCREW +BVTT 3X8 (S)	
#3	7-627-556-08	SCREW +P 2.6X2.8	
#4	7-621-775-00	SCREW +B 2.6X3	

English
95C0586-1
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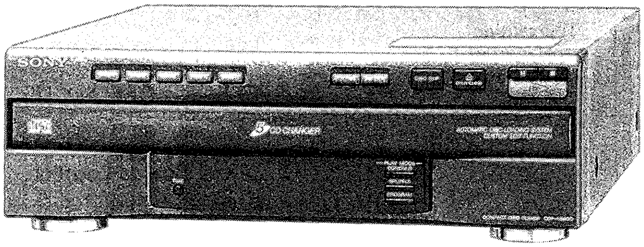
Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

Published by Home A&V Products Div.
Quality Engineering Dept.

CDP-N550C

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
Chinese Model
PX Model



CDP-N550C is the CD player section in
LBT-N550, N550K, N550P, N650AV.

Model Name Using Similar Mechanism	HCD-N350
Base Unit Type	BU-5BD19
Optical Pick-up Type	KSS-213BA/S-N

SPECIFICATIONS

Laser	Semiconductor laser
Wavelength	780 - 790 nm
Mass	Approx. 4.5 kg
Dimensions	Approx. 355 x 120 x 380 mm (w/h/d, including projections)

COMPACT DISC PLAYER

SONY®

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION ;	INVISIBLE LASER RADIATION WHEN OPEN AVOID EXPOSURE TO BEAM
ADVARSEL ;	USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING
VARO! ;	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSÄTEILYLLE.
VARNING ;	LASERSTRÅLING NÄR DENNA DEL ÄR OPPNAD OCH SPÄRREN ÄR URXOPPLAD
ADVARSEL ;	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN

This caution label is located inside the unit.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor ofthe circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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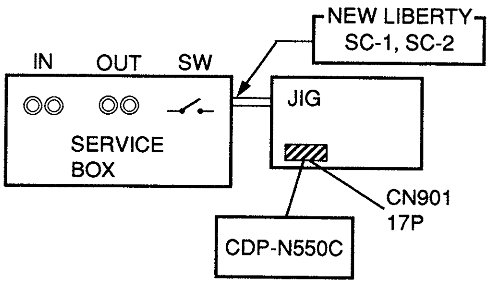
SERVICE NOTE

How to confirm the operation with a single unit

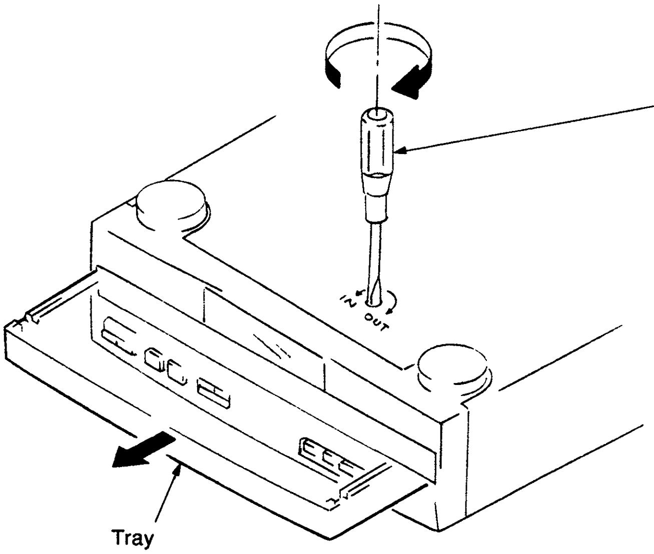
- Normally, this set does not operate with a single unit.
  The exclusive jig (J-2501-081-A) is necessary to operate the set with a single unit.
  The cable attached to set is used for connecting with the jig.

How to turn the power on

- If the power switch of the service box is set to ON, the power supply of the set is turned on. The sound signal is input/output through CN204 (SYSTEM CONTROL 1). In case of using the input/output terminal of SERVICE BOX, press TIME button, ▶▶▷▷‖ button and ■ button for more than three seconds at once.

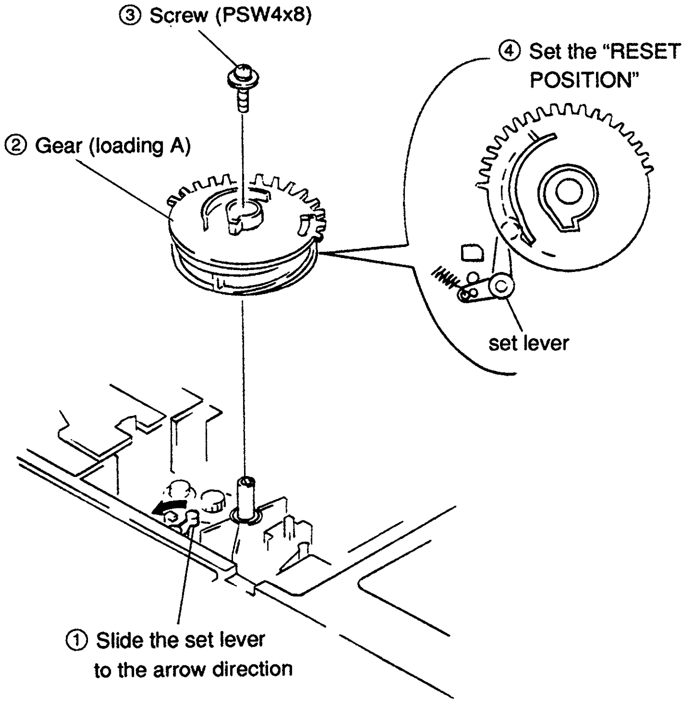


HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



Insert a tapering driver into the aperture of the unit bottom, and turn in the direction of arrow (to OUT direction).
∗ To close the disc tray, turn the driver in the reverse direction (to IN direction).

NOTE FOR GEAR (LOADING A) INSTALLATION



③ Screw (PSW4x8)

④ Set the "RESET POSITION"

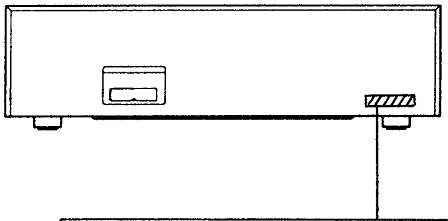
② Gear (loading A)

set lever

① Slide the set lever to the arrow direction

MODEL IDENTIFICATION

— BACK PANEL —



	Part No.
AEP, UK, G, IT Model	4-969-794-0□
E, AR, MY, SP, CH Model	4-969-794-1□
MX, PX, AUS, EA Model	4-969-794-2□

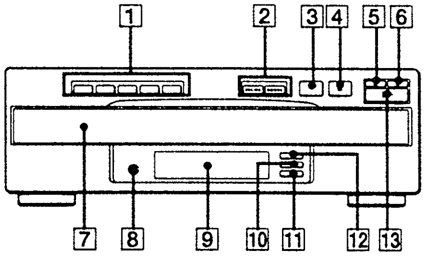
- Abbreviation

G	: German model.
IT	: Italian model.
AR	: Argentine model.
MY	: Malaysia model.
SP	: Singapore model.
CH	: Chinese model.
MX	: Mexican model.
AUS	: Australian model.
EA	: Saudi Arabia model.

SECTION 1
GENERAL

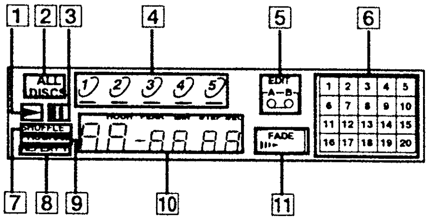
This section is extracted from instruction manual.

Compact disc player


1
2
3
4
5
6
7
8
9
10
11
12
13

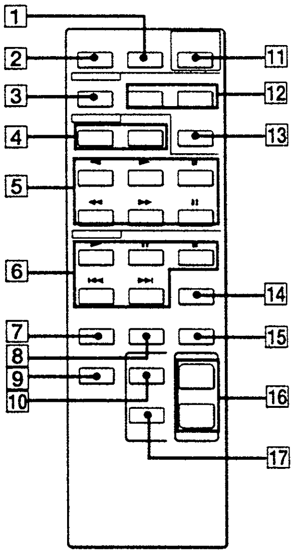
1 DISC SELECT 1-5 buttons (8, 9)
2 ⏮◀◀/▶▶⏭ buttons (8, 9)
3 DISC SKIP button (8)
4 ⏏ OPEN/CLOSE button (8)
5 ❚❚ (pause) button (8)
6 ■ (stop) button (8, 9)
7 Disc tray
8 TIME button (8)
9 Display window (8)
10 SHUFFLE button (9)
11 PROGRAM button (9)
12 CONTINUE button (9)
13 ▷ (play) button (8)

Compact disc player


1
2
3
4
5
6
ALL DISCS
1
2
3
4
5
EDIT
A–B
SHUFFLE
FADE
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
7
8
9
10
11

1 Play indication (8)
2 ALL DISCS/1 DISC indications (8, 9, 10)
3 Pause indication
4 Disc calendar (8, 9, 10)
5 EDIT indications (16)
6 Music calendar (8, 9, 10)
7 SHUFFLE indication (9)
8 REPEAT indication (10)
9 PROGRAM indication (9, 16)
10 Playing time indications (8)
11 FADE indications

Remote (RM-S500L)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

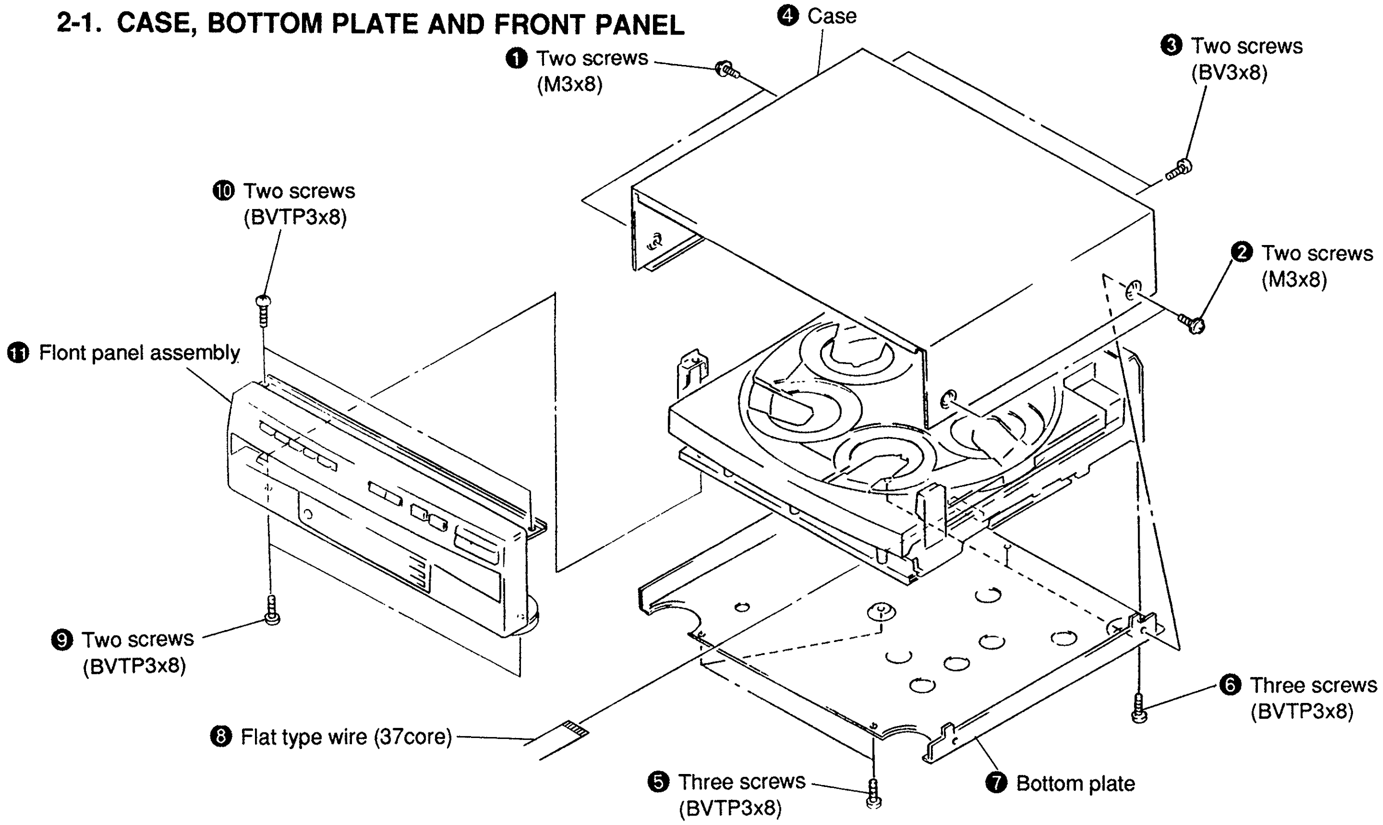
1 SLEEP button (21)
2 FUNCTION button (7, 14, 15, 18)
3 TUNER BAND button (11, 22)
4 DECK SELECT buttons (13)
5 TAPE operating buttons (13)
  - ◀/▶ (reverse side play/front side play)
  - ◀◀/▶▶ (fast leftward/fast rightward)
  - ■ (stop)
  - ❚❚ (pause)
6 CD operating buttons (8)
  - ▶ (play)
  - ⏮/⏭ (AMS*)
  - ❚❚ (pause)
  - ■ (stop)
  - *AMS: Automatic Music Sensor
7 CHECK button (10, 16)
8 CLEAR button (10)
9 DISC SKIP button (8)
10 SELECT 1-5 button (19)
11 SYSTEM POWER button (7, 8, 11, 13)
12 PRESET (+/–) buttons (12)
13 STEREO/MONO button (11)
14 REPEAT button (10)
15 EDIT button (16)
16 VOL (volume) buttons (8)
17 P.FILE 1-5 button (20)

SECTION 2

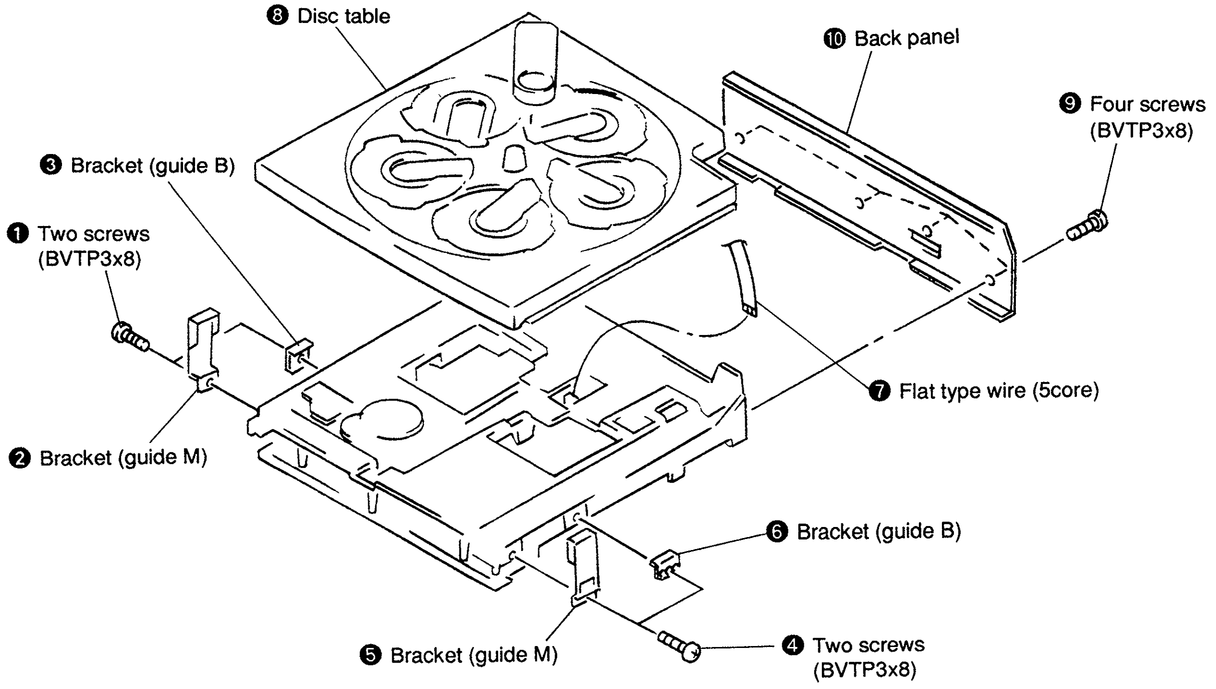
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

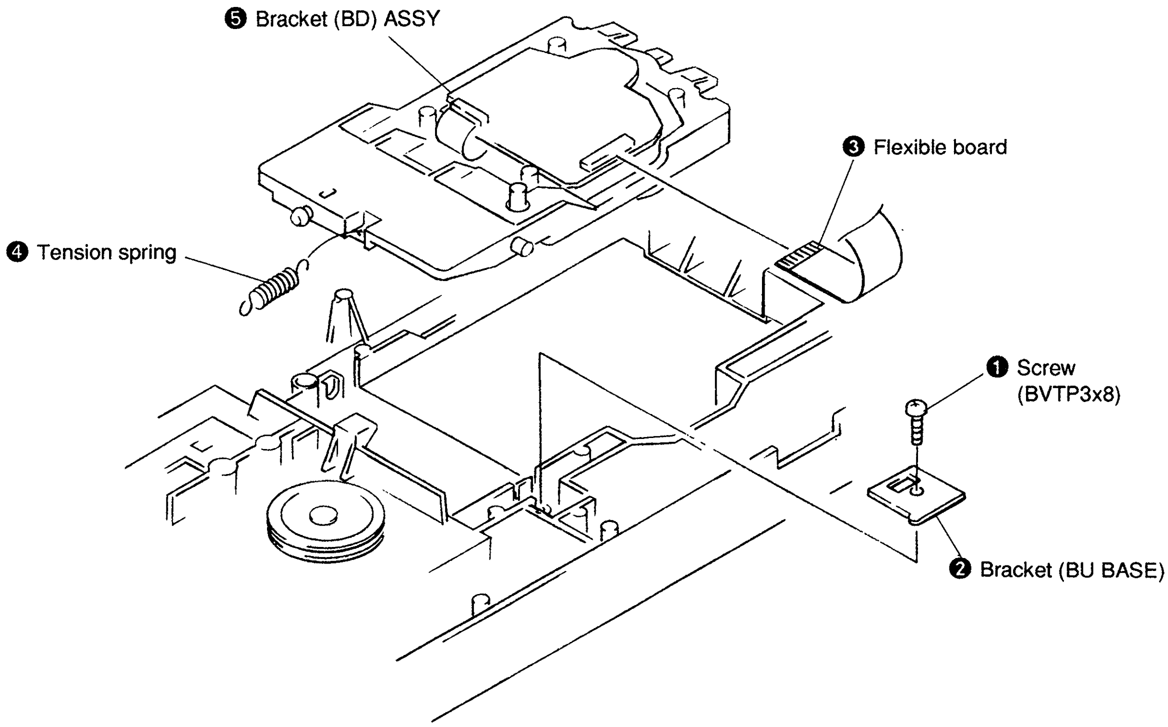
2-1. CASE, BOTTOM PLATE AND FRONT PANEL


❹ Case
❶ Two screws (M3x8)
❸ Two screws (BV3x8)
❿ Two screws (BVTP3x8)
❷ Two screws (M3x8)
⓫ Flont panel assembly
❾ Two screws (BVTP3x8)
❻ Three screws (BVTP3x8)
❽ Flat type wire (37core)
❺ Three screws (BVTP3x8)
❼ Bottom plate

2-2. BACK PANEL AND DISC TABLE

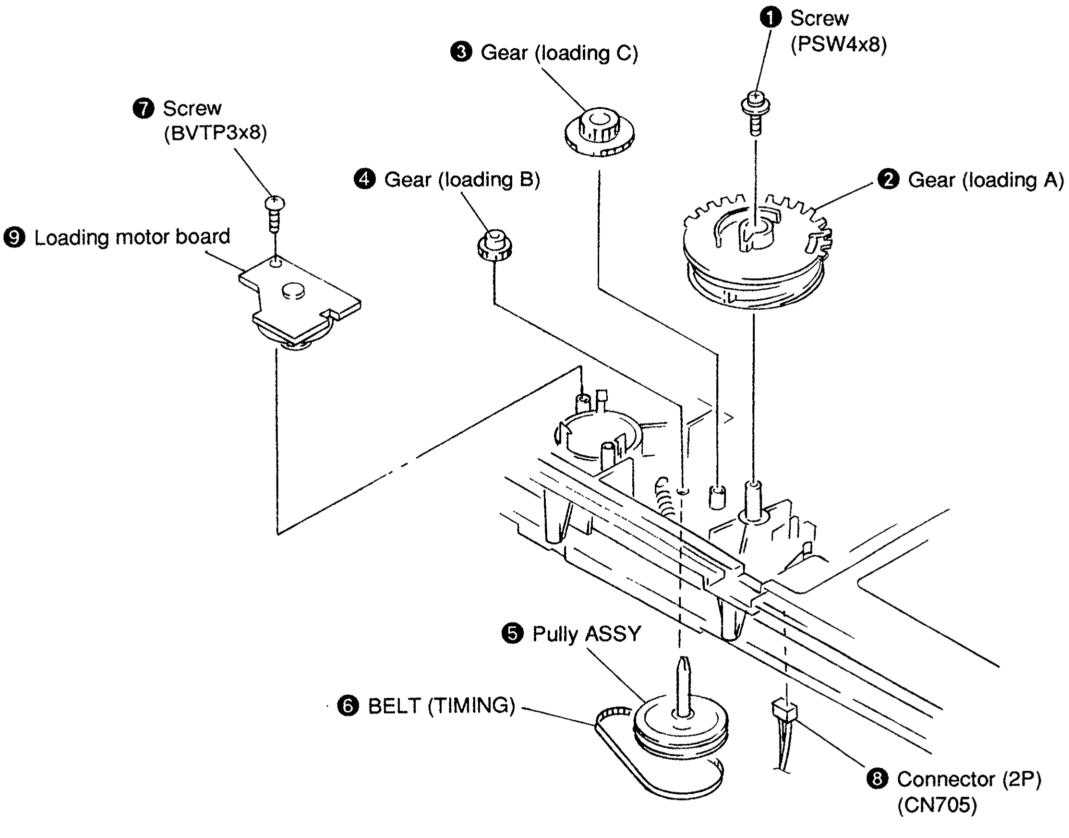

❽ Disc table
❿ Back panel
❾ Four screws (BVTP3x8)
❸ Bracket (guide B)
❶ Two screws (BVTP3x8)
❼ Flat type wire (5core)
❷ Bracket (guide M)
❻ Bracket (guide B)
❺ Bracket (guide M)
❹ Two screws (BVTP3x8)

2-3. BRACKET (BD) ASSY



❺ Bracket (BD) ASSY
❸ Flexible board
❹ Tension spring
❶ Screw
(BVTP3x8)
❷ Bracket (BU BASE)

2-4. LOADING MOTOR BOARD



❶ Screw
(PSW4x8)
❸ Gear (loading C)
❼ Screw
(BVTP3x8)
❹ Gear (loading B)
❷ Gear (loading A)
❾ Loading motor board
❺ Pully ASSY
❻ BELT (TIMING)
❽ Connector (2P)
(CN705)

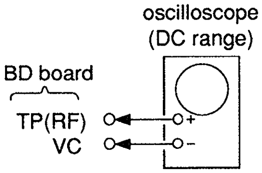
SECTION 3

ELECTRICAL ADJUSTMENTS

Note :

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

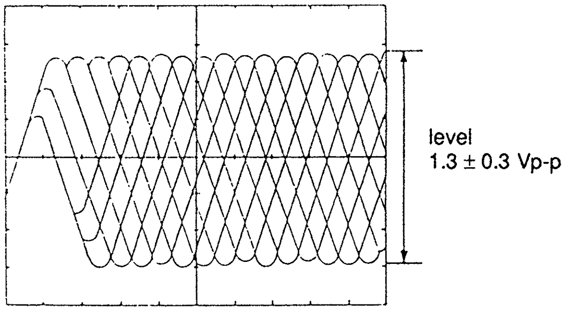
Focus Bias Adjustment



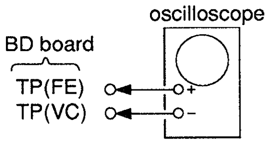
Procedure:

1. Connect oscilloscope to test point TP (RF). (GND terminal : VC)
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Adjust RV101 so that the waveform is clear.
   (Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.)
5. After adjustment, check the RF signal level.

- RF signal
  VOLT/DIV : 200 mV
  TIME/DIV : 500 nS



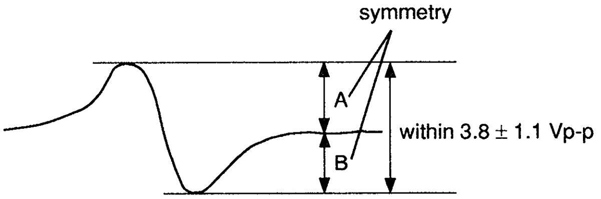
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and GND by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3.8±1.1 Vp-p.

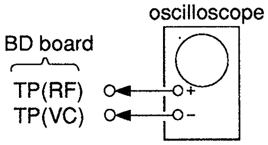
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note : • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



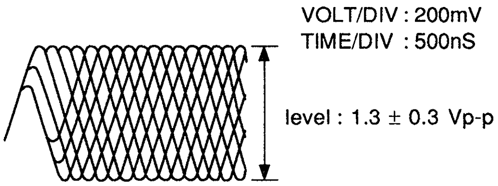
Procedure :

1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

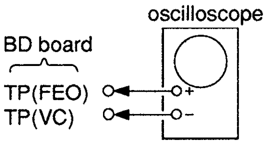
Note :

Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

RF signal waveform



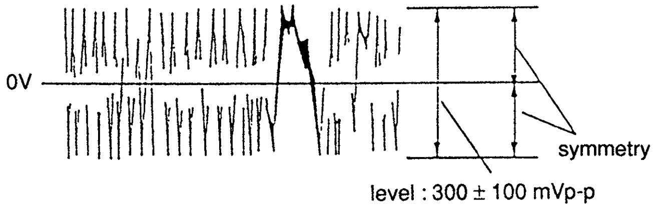
E-F Balance Check


oscilloscope
BD board
TP(FEO)
TP(VC)
+
-

Procedure :

1. Connect test point TP (ADJ) on Main board to GND with a lead wire.
2. Connect oscilloscpe to test point TP (TEO).
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0Vdc, and check this level.

Traverse waveform



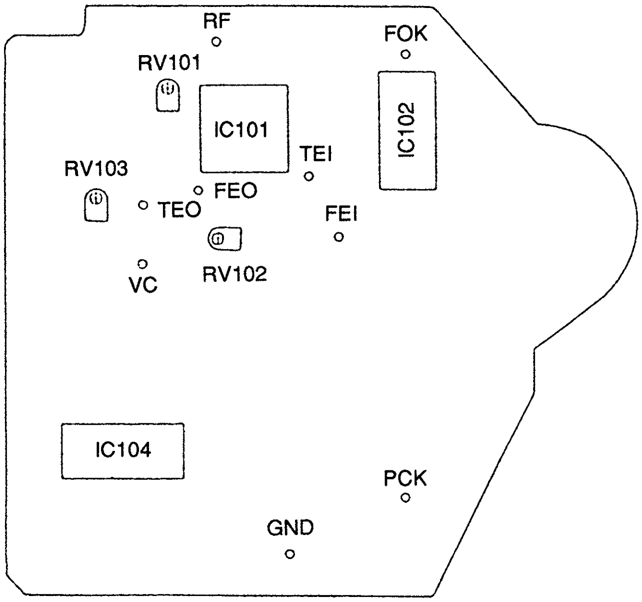
6. Remove the lead wire connected in step 1.

Focus/Tracking Gain Adjustment (RV102, RV103)

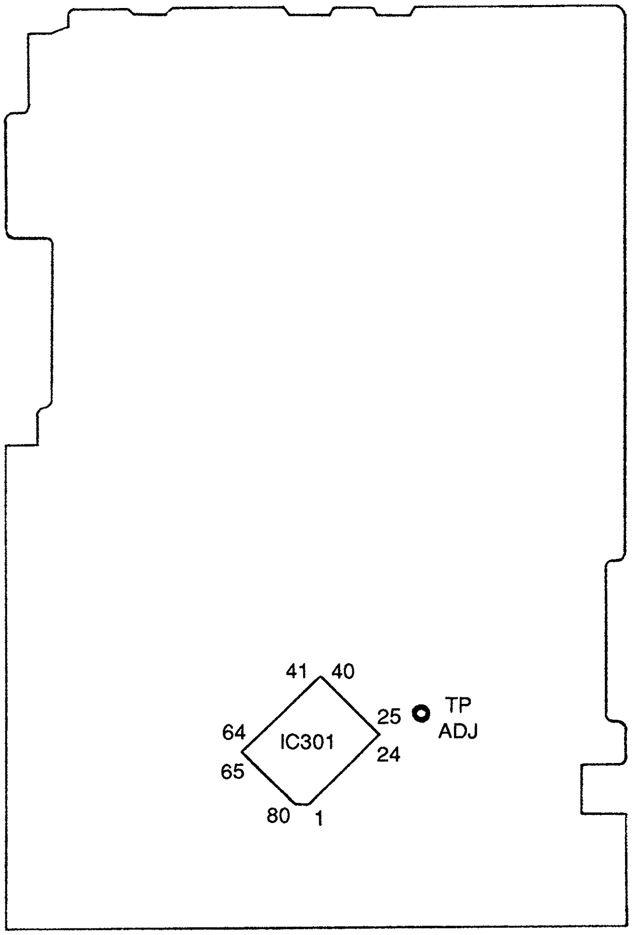
This gain has a margin, so even if it is slightly off.
There is no problem.
Therfore, do not perform this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location :

[BD BOARD] (Conductor Side)


RF
FOK
RV101
IC101
IC102
TEI
RV103
FEO
TEO
FEI
RV102
VC
IC104
PCK
GND

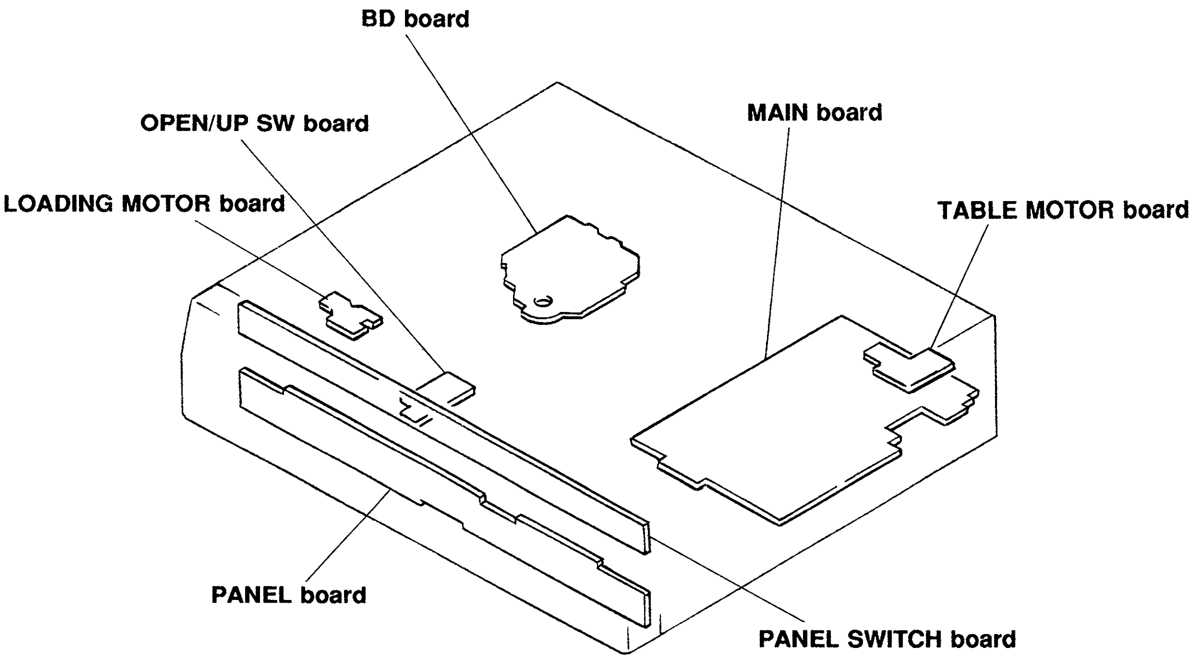
[MAIN BOARD] (Conductor Side)


41
40
25
TP
ADJ
64
IC301
24
65
80
1

SECTION 4

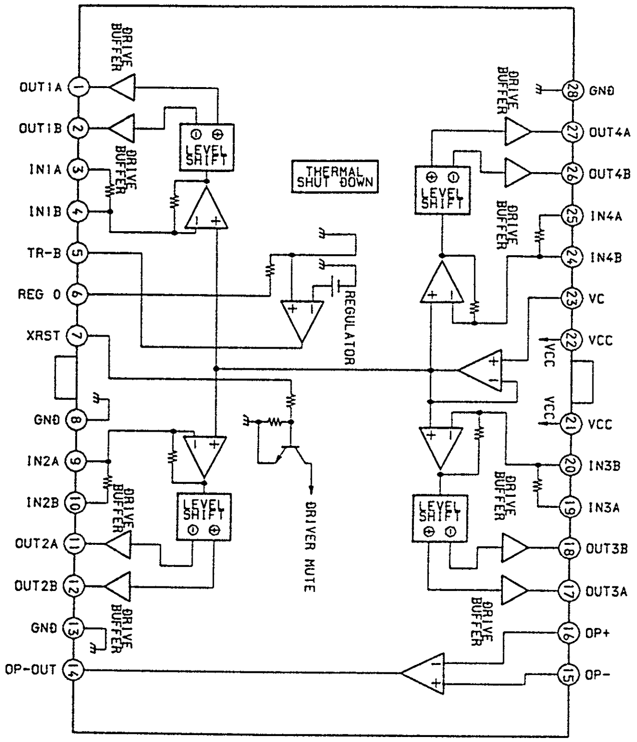
DIAGRAMS

4-1. CIRCUIT BOARDS LOCATIONS

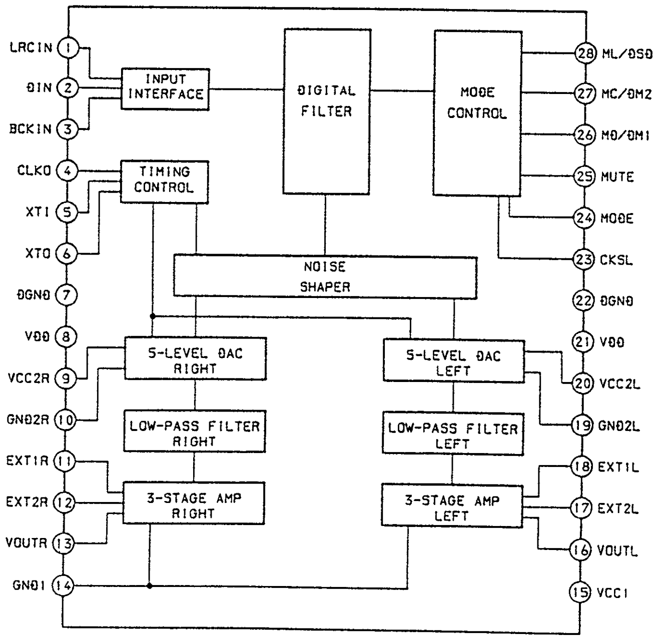

BD board
OPEN/UP SW board
MAIN board
LOADING MOTOR board
TABLE MOTOR board
PANEL board
PANEL SWITCH board

4-2. IC BLOCK DIAGRAMS

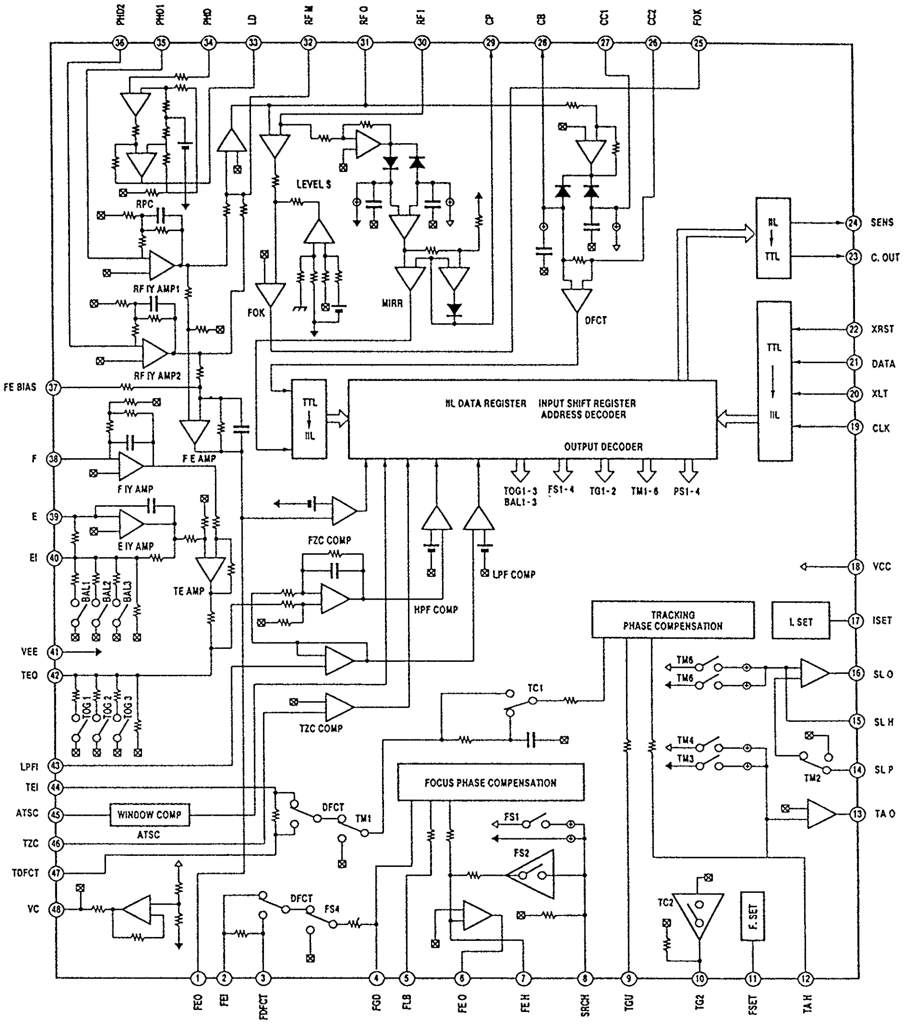
IC102 BA6397FP


OUT1A 1
OUT1B 2
IN1A 3
IN1B 4
TR-B 5
REG 0 6
XRST 7
GND 8
IN2A 9
IN2B 10
OUT2A 11
OUT2B 12
GND 13
OP-OUT 14
OP- 15
OP+ 16
OUT3A 17
OUT3B 18
IN3A 19
IN3B 20
VCC 21
VCC 22
VC 23
IN4B 24
IN4A 25
OUT4B 26
OUT4A 27
GND 28
DRIVE BUFFER
LEVEL SHIFT
THERMAL SHUT DOWN
REGULATOR
VCC
DRIVER MUTE

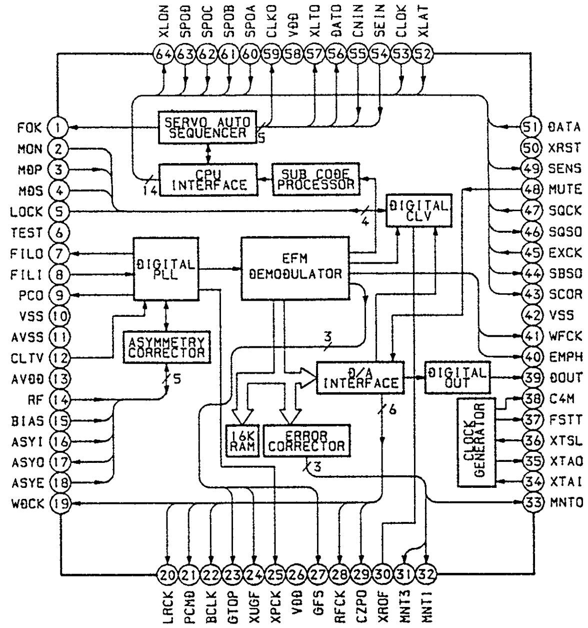
IC104 PCM1710U


LRCIN 1
DIN 2
BCKIN 3
CLKO 4
XTI 5
XTO 6
DGND 7
VDD 8
VCC2R 9
GND2R 10
EXT1R 11
EXT2R 12
VOUTR 13
GND1 14
VCC1 15
VOUTL 16
EXT2L 17
EXT1L 18
GND2L 19
VCC2L 20
VDD 21
DGND 22
CKSL 23
MODE 24
MUTE 25
MD/DM1 26
MC/DM2 27
ML/DSD 28
INPUT INTERFACE
DIGITAL FILTER
MODE CONTROL
TIMING CONTROL
NOISE SHAPER
5-LEVEL DAC RIGHT
5-LEVEL DAC LEFT
LOW-PASS FILTER RIGHT
LOW-PASS FILTER LEFT
3-STAGE AMP RIGHT
3-STAGE AMP LEFT

IC101 CXA1782BQ

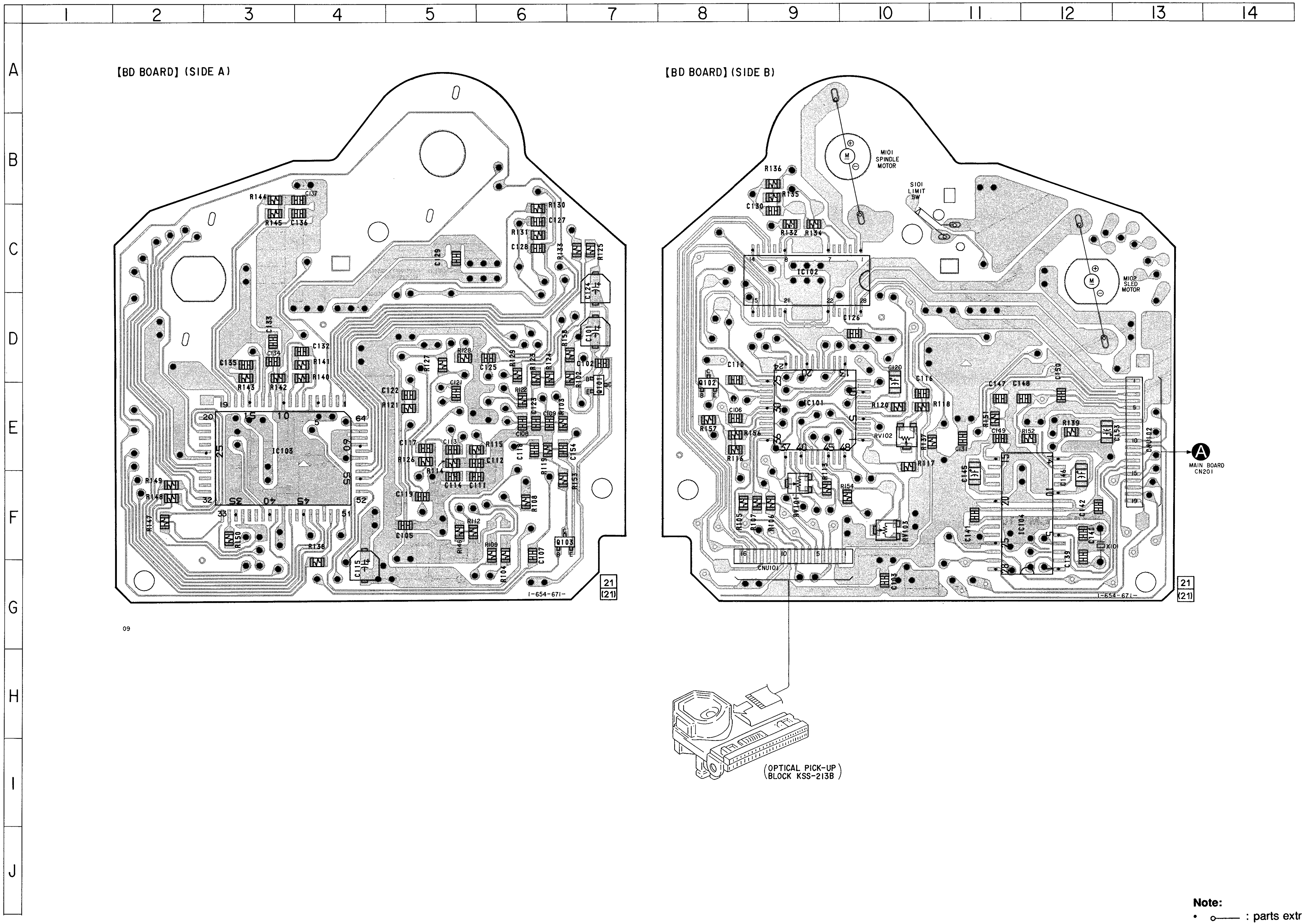

PHD2
PHD1
PHD
LD
RF M
RF O
RF I
CP
CB
CC1
CC2
FOK
36
35
34
33
32
31
30
29
28
27
26
25
RPC
RF IY AMP1
RF IY AMP2
LEVEL S
FOK
MIRR
DFCT
IIL
TTL
SENS
C. OUT
24
23
XRST
DATA
XLT
CLK
22
21
20
19
FE BIAS
37
F
38
E
39
EI
40
F E AMP
F IY AMP
E IY AMP
TE AMP
IIL DATA REGISTER
INPUT SHIFT REGISTER
ADDRESS DECODER
OUTPUT DECODER
TOG1-3
BAL1-3
FS1-4
TG1-2
TM1-6
PS1-4
FZC COMP
LPF COMP
HPF COMP
VCC
18
BAL1
BAL2
BAL3
TRACKING
PHASE COMPENSATION
L SET
ISET
17
VEE
41
TEO
42
TOG 1
TOG 2
TOG 3
TM6
TM5
SL O
16
SL H
15
TC1
TZC COMP
TM4
TM3
TM2
SL P
14
LPFI
43
TEI
44
ATSC
45
TZC
46
TDFCT
47
VC
48
WINDOW COMP
ATSC
DFCT
TM1
FOCUS PHASE COMPENSATION
FS1
FS2
TA O
13
DFCT
FS4
TC2
F. SET
1
2
3
4
5
6
7
8
9
10
11
12
FEO
FEI
FDFCT
FGD
FLB
FE O
FE H
SRCH
TGU
TG2
FSET
TA H

IC103 CXD2507AQ


XLON
SPOD
SPOC
SPOB
SPOA
CLKO
VDD
XLTO
DATO
CNIN
SEIN
CLOK
XLAT
64
63
62
61
60
59
58
57
56
55
54
53
52
FOK 1
MON 2
MDP 3
MDS 4
LOCK 5
TEST 6
FILO 7
FILI 8
PCO 9
VSS 10
AVSS 11
CLTV 12
AVDD 13
RF 14
BIAS 15
ASYI 16
ASYO 17
ASYE 18
WDCK 19
SERVO AUTO SEQUENCER
5
CPU INTERFACE
14
SUB CODE PROCESSOR
DIGITAL CLV
4
DIGITAL PLL
EFM DEMODULATOR
ASYMMETRY CORRECTOR
5
3
D/A INTERFACE
DIGITAL OUT
6
16K RAM
ERROR CORRECTOR
3
CLOCK GENERATOR
51 DATA
50 XRST
49 SENS
48 MUTE
47 SQCK
46 SQSO
45 EXCK
44 SBSO
43 SCOR
42 VSS
41 WFCK
40 EMPH
39 DOUT
38 C4M
37 FSTT
36 XTSL
35 XTAO
34 XTAI
33 MNTO
20
21
22
23
24
25
26
27
28
29
30
31
32
LRCK
PCMD
BCLK
GTOP
XUGF
XPCK
VDD
GFS
RFCK
C2PO
XROF
MNT3
MNT1

4-3. PRINTED WIRING BOARD — BD SECTION —

- See page 9 for Circuit Boards Location.


1
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7
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9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
[BD BOARD] (SIDE A)
[BD BOARD] (SIDE B)
IC103
IC101
IC102
IC104
Q101
Q102
Q103
M101 SPINDLE MOTOR
M102 SLED MOTOR
S101 LIMIT SW
CN101
CN102
RV101
RV102
RV103
X101
MAIN BOARD CN201
A
1-654-671-
21
(21)
09
(OPTICAL PICK-UP BLOCK KSS-213B)

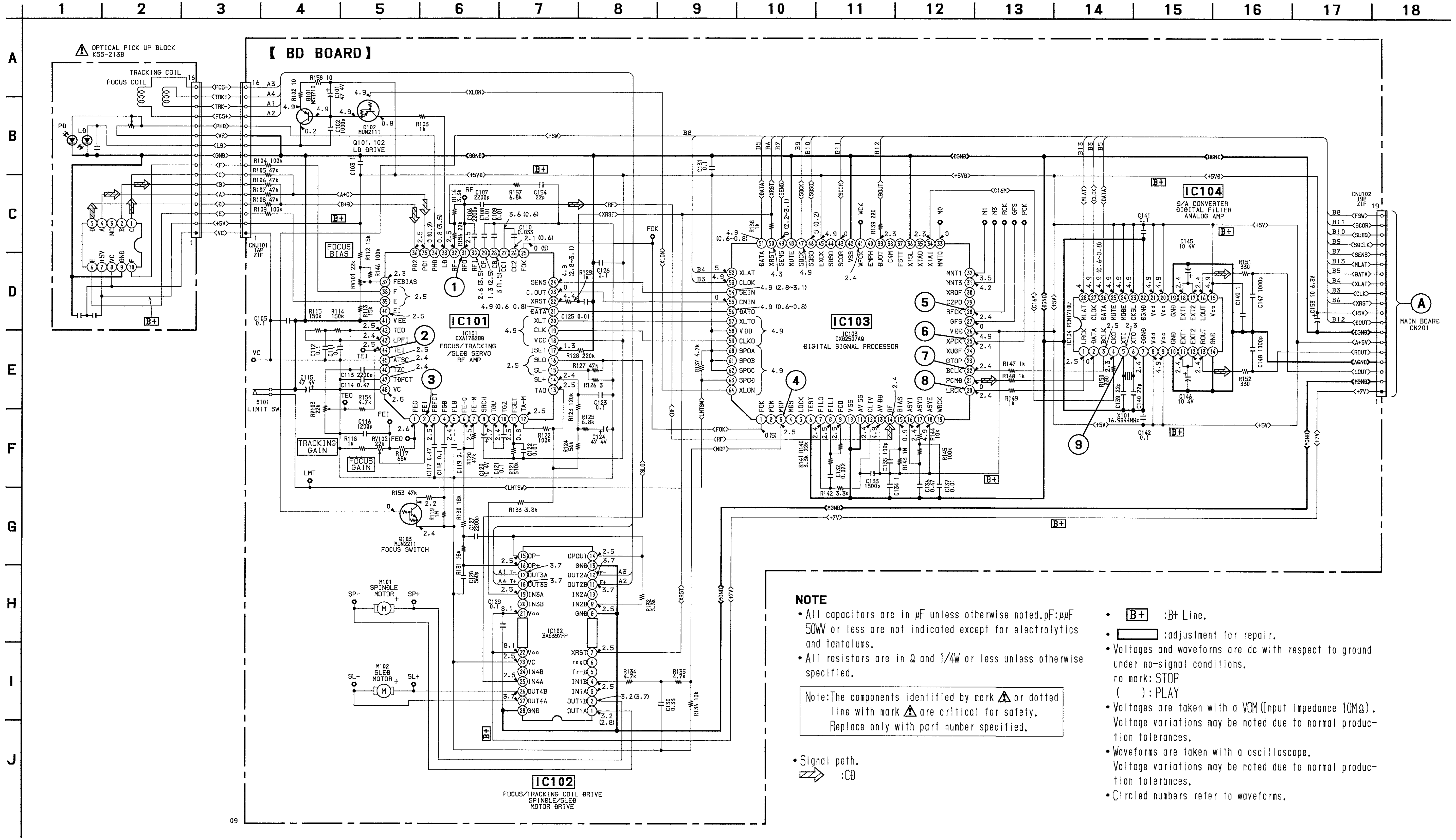
- **Semiconductor Location**

Ref. No.	Location
IC101	E-9
IC102	C-8
IC103	E-3
IC104	F-11
Q101	D-6
Q102	D-7
Q103	F-6

Note:

- o——— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern from the side which enable seeing. (The other layer's patterns are not indicated.)

4-4. SCHEMATIC DIAGRAM — BD SECTION —
• See page 9 for IC BLOCK DIAGRAMS.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
A B C D E F G H I J
【 BD BOARD 】
OPTICAL PICK UP BLOCK KSS-213B
TRACKING COIL
FOCUS COIL
CNJ101
Q101, 102 LD DRIVE
FOCUS BIAS
IC101 CXA1782BQ FOCUS/TRACKING /SLED SERVO RF AMP
TRACKING GAIN
FOCUS GAIN
S101 LIMIT SW
Q103 MUN2211 FOCUS SWITCH
M101 SPINDLE MOTOR
M102 SLED MOTOR
IC102 BA6397FP
IC102 FOCUS/TRACKING COIL DRIVE SPINDLE/SLED MOTOR DRIVE
IC103 CXD2507AQ DIGITAL SIGNAL PROCESSOR
IC104 PCM1710U D/A CONVERTER DIGITAL FILTER ANALOG AMP
X101 16.9344MHz
CNJ102
A
MAIN BOARD CN201
B+

NOTE

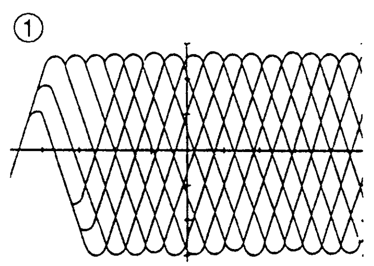
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

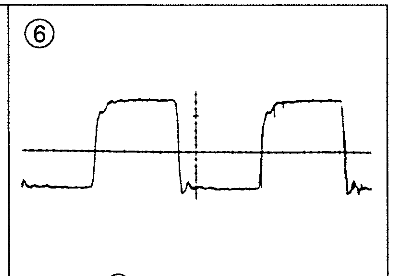
- Signal path.
  ⇨ : CD

- B+ : B+ Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: STOP
  ( ) : PLAY
- Voltages are taken with a VOM (Input impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

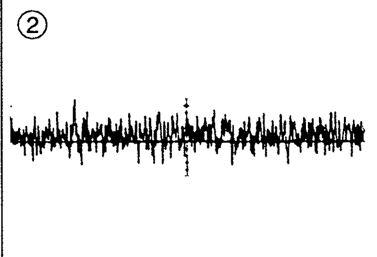
• **Waveforms**



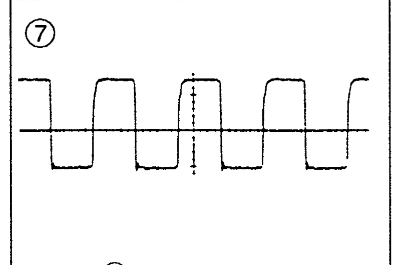
IC101 ㉛ pin 1.4Vp-p



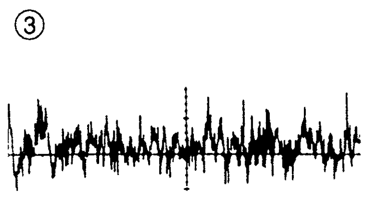
IC103 ㉕ pin 5.1Vp-p 232.7sec



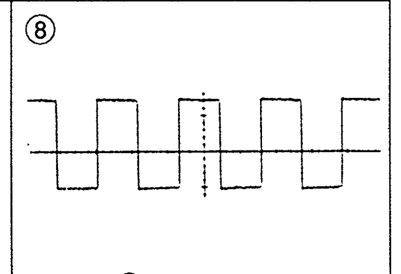
IC101 (44) pin 8mVp-p 0.2ms/DIV



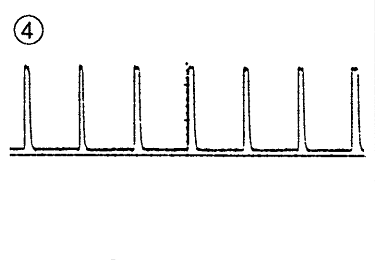
IC103 ㉒ pin 5.1Vp-p 472.7nsec



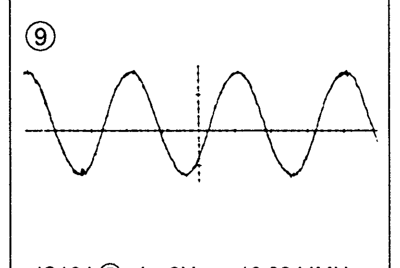
IC101 ② pin 20mVp-p 2ms/DIV



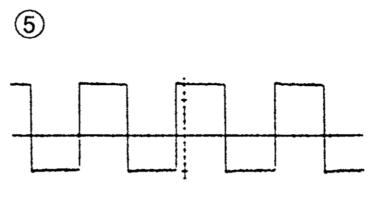
IC103 ⑳ pin 5.1Vp-p 23μsec



IC103 ③ pin 2.4Vp-p 7.5μsec



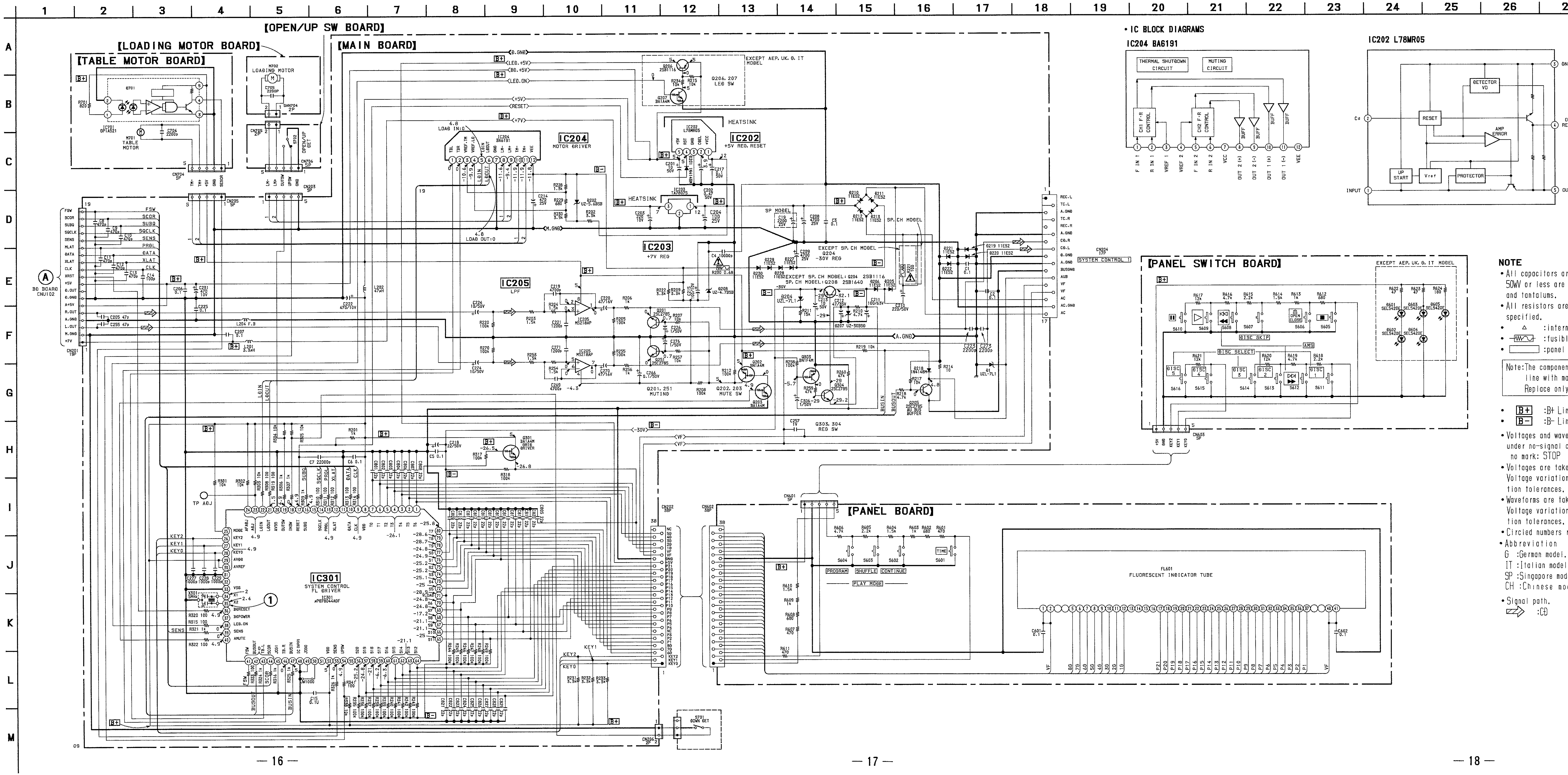
IC104 ⑤ pin 3Vp-p 16.9344MHz



IC103 ㉘ pin 5.1mVp-p 137μsec

4-5. SCHEMATIC DIAGRAM — MAIN SECTION —

• See page 22 for IC Pin Function. (IC301)

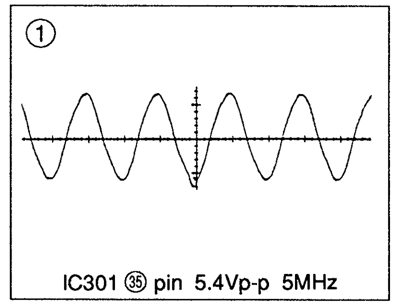

[OPEN/UP SW BOARD]
[LOADING MOTOR BOARD]
[TABLE MOTOR BOARD]
[MAIN BOARD]
[PANEL SWITCH BOARD]
[PANEL BOARD]
IC204 MOTOR DRIVER
IC202 +5V REG. RESET
IC203 +7V REG
IC205 LPF
IC301 SYSTEM CONTROL FL DRIVER
FL601 FLUORESCENT INDICATOR TUBE
M701 TABLE MOTOR
M702 LOADING MOTOR
BD BOARD CN102
SYSTEM CONTROL 1
DISC SKIP
DISC SELECT
PROGRAM
SHUFFLE
CONTINUE
PLAY MODE
EXCEPT AEP, UK, G, IT MODEL
EXCEPT SP, CH MODEL
SP, CH MODEL
THERMAL SHUTDOWN CIRCUIT
MUTING CIRCUIT
CH1 F·R CONTROL
CH2 F·R CONTROL
BUFF
F IN 1
R IN 1
VREF 1
VREF 2
F IN 2
R IN 2
VCC
OUT 2 (+)
OUT 2 (-)
OUT 1 (+)
OUT 1 (-)
VEE
GND
Cd
OUT RESET
INPUT
OUTPUT
RESET
DETECTOR VD
AMP ERROR
UP START
Vref
PROTECTOR

• IC BLOCK DIAGRAMS

IC204 BA6191

IC202 L78MR05

• **Waveforms**



IC301 ㉟ pin 5.4Vp-p 5MHz

NOTE

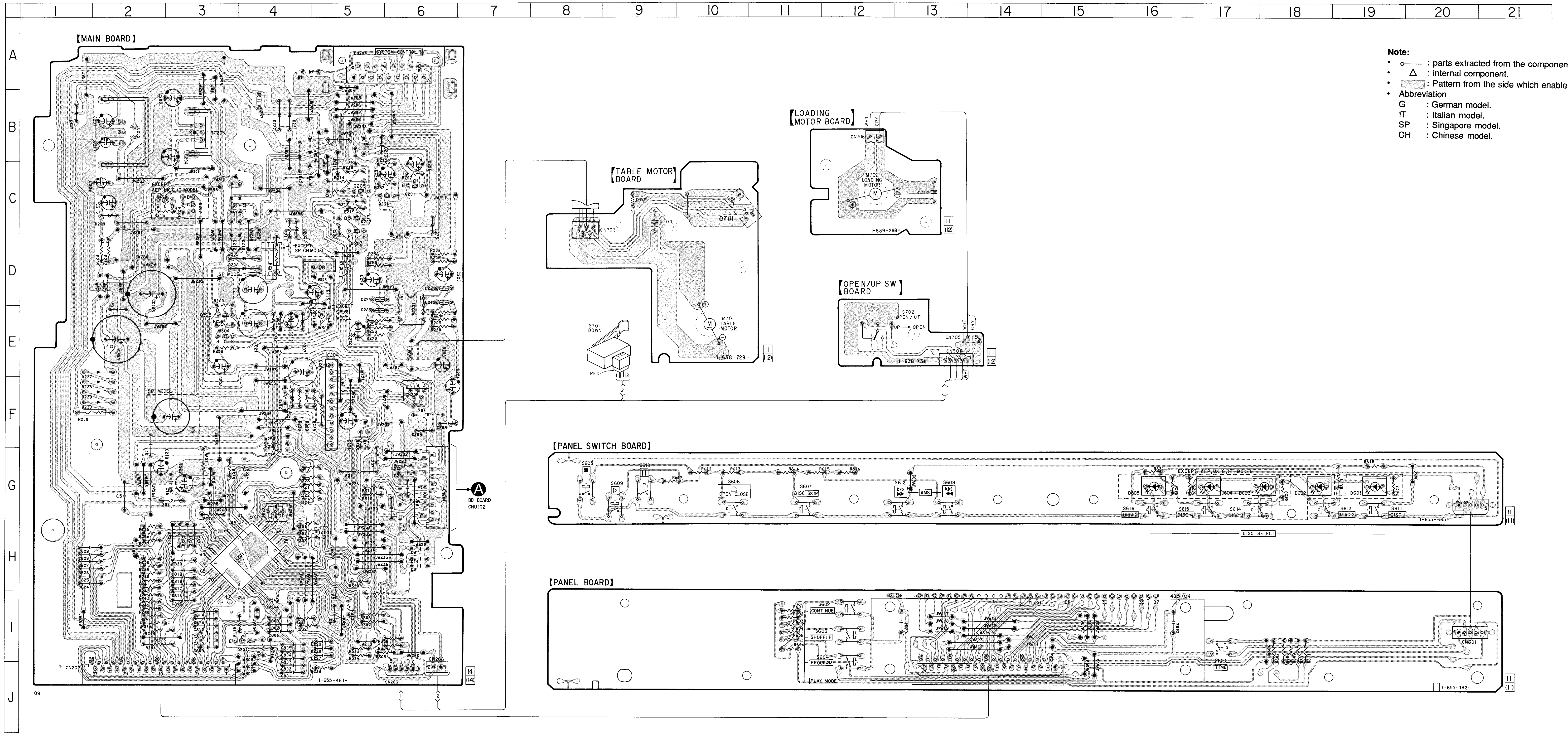
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ :internal component.
- :fusible resistor.
- :panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- B+ :B+ Line.
- B− :B− Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: STOP
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Abbreviation
  G :German model.
  IT :Italian model.
  SP :Singapore model.
  CH :Chinese model.
- Signal path.
  ⇨ :CD

4-6. PRINTED WIRING BOARD — MAIN SECTION —

• See page 9 for Circuit Boards Location.


1
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19
20
21
A
B
C
D
E
F
G
H
I
J
【MAIN BOARD】
SYSTEM CONTROL
IC202
IC203
IC204
IC205
IC301
EXCEPT AEP,UK,G,IT MODEL
EXCEPT SP,CH MODEL
SP MODEL
SP,CH MODEL
BD BOARD CNU102
CN202
CN203
CN205
1-655-481-
【TABLE MOTOR】 BOARD
CN707
C704
R701
D701
M701 TABLE MOTOR
S701 DOWN
RED
1-638-729-
【LOADING MOTOR BOARD】
CN706
M702 LOADING MOTOR
C705
1-639-288-
【OPEN/UP SW BOARD】
S702 OPEN/UP
UP
OPEN
CN705
CN704
WHT
GRY
1-638-731-
【PANEL SWITCH BOARD】
S605
S609
S610
S606 OPEN CLOSE
S607 DISC SKIP
S612 AMS
S608
EXCEPT AEP,UK,G,IT MODEL
D605
D604
D603
D602
D601
S616 DISC 5
S615 DISC 4
S614 DISC 3
S613 DISC 2
S611 DISC 1
DISC SELECT
CN605
1-655-665-
【PANEL BOARD】
S602 CONTINUE
S603 SHUFFLE
S604 PROGRAM
PLAY MODE
FL601
S601 TIME
CN601
1-655-482-
09

Note:

- ○—— : parts extracted from the component side.
- △ : internal component.
- ▨ : Pattern from the side which enable seeing.
- Abbreviation
  - G : German model.
  - IT : Italian model.
  - SP : Singapore model.
  - CH : Chinese model.

• **Semiconductor Location**

Ref. No.	Location
D1	A-4
D201	B-1
D202	F-4
D204	D-4
D205	D-3
D206	D-3
D207	E-4
D208	C-2
D210	D-4
D211	C-4
D212	D-3
D213	C-3
D218	C-5
D219	C-5
D220	C-4
D221	B-4
D222	B-4
D227	F-1
D228	F-1
D229	F-1
D230	F-1
D601	G-19
D602	G-18
D603	G-18
D604	G-17
D605	G-16
D701	C-10
IC202	B-2
IC203	B-3
IC204	E-5
IC205	E-6
IC301	H-4
Q201	C-6
Q202	C-5
Q203	D-5
Q204	E-5
Q205	C-5
Q206	C-2
Q207	C-3
Q208	D-5
Q251	C-6
Q301	I-4
Q303	E-3
Q304	E-3

4-5. IC PIN FUNCTION

- **IC301 SYSTEM CONTROL, FL DRIVER (μPD78044AGF)**

Pin No.	Pin Name	I/O	Function
1	T6	O	FL display grid output
2	T5	O	
3	T4	O	
4	T3	O	
5	T2	O	
6	T1	O	
7	T0	O	
8	VDD	–	+5V power supply
9	CLK	O	Serial clock output to DSP (CXD-2507AQ)
10	DATA	O	Serial data output to DSP (CXD-2507AQ)
11	———	–	Fixed at GND
12	XLAT	O	Serial data latch pulse output to DSP (CXD-2507AQ)
13	PRGL	O	Serial data latch pulse output to D/F DAC (PCM-1710U)
14	SQCLK	O	Subcode Q data read clock output to DSP (CXD-2507AQ)
15	———	–	Not used (open)
16	SUBQ	I	Subcode Q data input from DSP (CXD-2507AQ)
17	RESET	I	System reset input ("L"=Active)
18	INSW	I	S701 (loading-in switch) input
19	OUTSW	I	S702 (loading-out switch) input
20	AVss	–	GND
21	LDOUT	O	Output for rotating M702 (loading motor) in the loading-out direction
22	LDIN	O	Output for rotating M702 (loading motor) in the loading-in direction
23	ADJ	I	Test mode input. "L"=Stops GFS check.
24	AFADJ	I	Test mode input. Fixed at "H" ("L":Test mode)
25	MODE	I	Not used (Fixed at "H")
26	KEY2	I	Key AD input
27	KEY1	I	
28	KEY0	I	
29	AVDD	–	+5V power supply
30	AVREF	–	
31	———	–	Fixed at GND
32	———	–	Not used (open)
33	Vss	–	GND
34	X1	I	Clock (5MHz)
35	X2	O	
36	BDRESET	O	BD reset output
37	BDPOWER	O	Not used
38	LED ON	O	LED drive signal
39	SENS	I	SENS input from DSP (CXD-2507AQ)
40	AMUTE	O	Muting ON/OFF output

Pin No.	Pin Name	I/O	Function
41	FSW	O	Focus control signal
42	BSOUT	O	Audio bus output
43	TBL	O	Table motor control
44	SCOR	I	Subcode sync S0+S1 detection input
45	JOG1	I	JOG input (Fixed “L”)
46	TBR	O	Table motor control
47	BSIN	I	Audio bus input
48	IC (VPP)	–	Connect to GND
49	JOG0	I	JOG input (Fixed “L”)
50	———	–	Fixed “L”
51	———	–	Not used (open)
52	VDD	–	+5V power supply
53	SENS	–	Slit sensor of disc table input
54	UPSW	–	Disc table up det
55	———	–	Not used
56	S20	O	FL display segment output
57	S19	O	
58	S18	O	
59	S17	O	
60	S16	O	
61	S15	O	
62	S14	O	
63	S13	O	
64	S12	O	
65	S11	O	
66	S10	O	
67	S9	O	
68	S8	O	
69	S7	O	
70	S6	O	
71	VLOAD	–	–30V power supply for driving FL display
72	S5	O	FL display segment output
73	S4	O	
74	S3	O	
75	S2	O	
76	S1	O	
77	S0	O	FL display grid output
78	T9	O	
79	T8	O	
80	T7	O	

SECTION 5
EXPLODED VIEWS

NOTE:

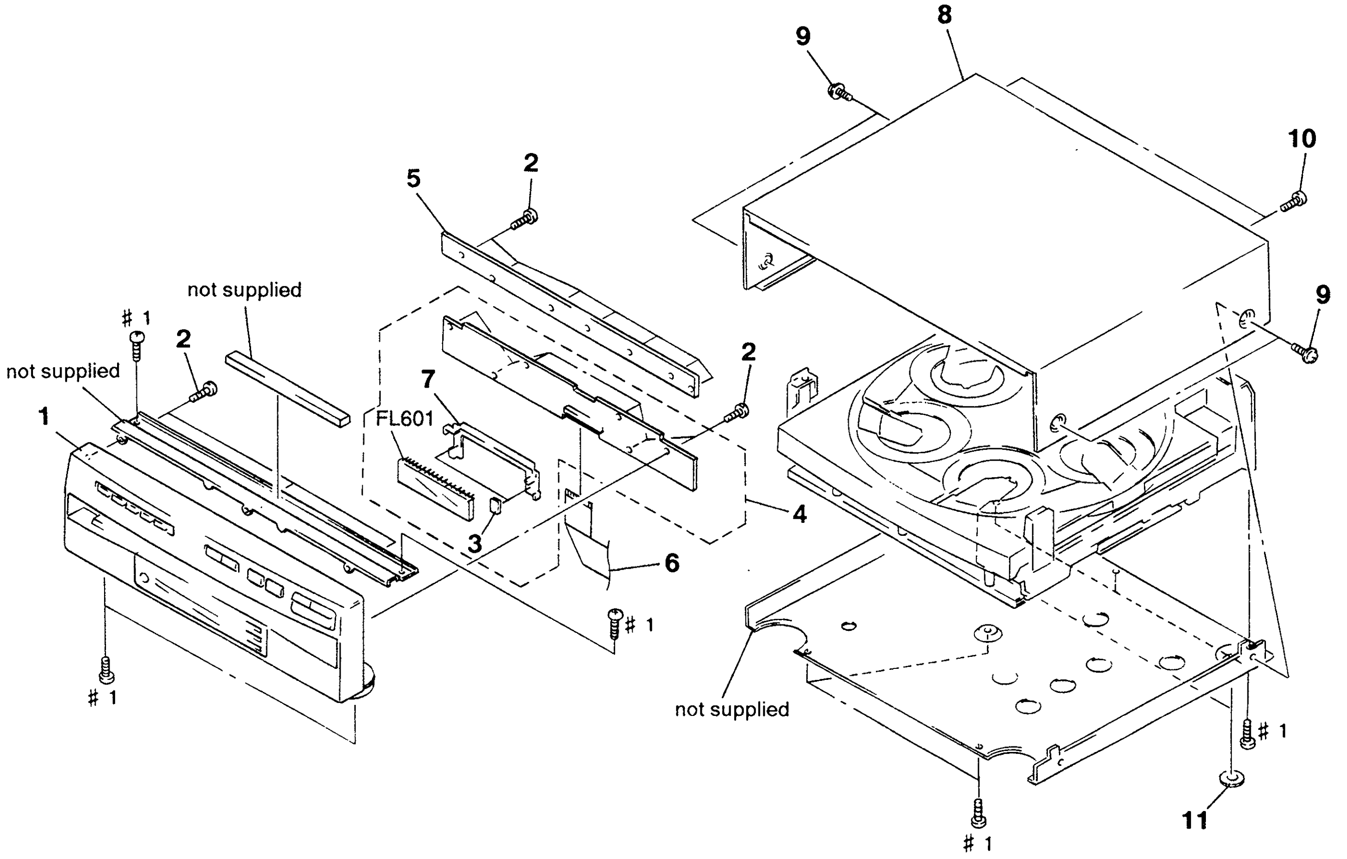
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

- Abbreviation

EA : Saudi Arabia model
G : German model
IT : Italian model
MX : Mexican model
SP : Singapore model
MY : Malaysia model
AUS : Australian model
CH : Chinese model
AR : Argentine model

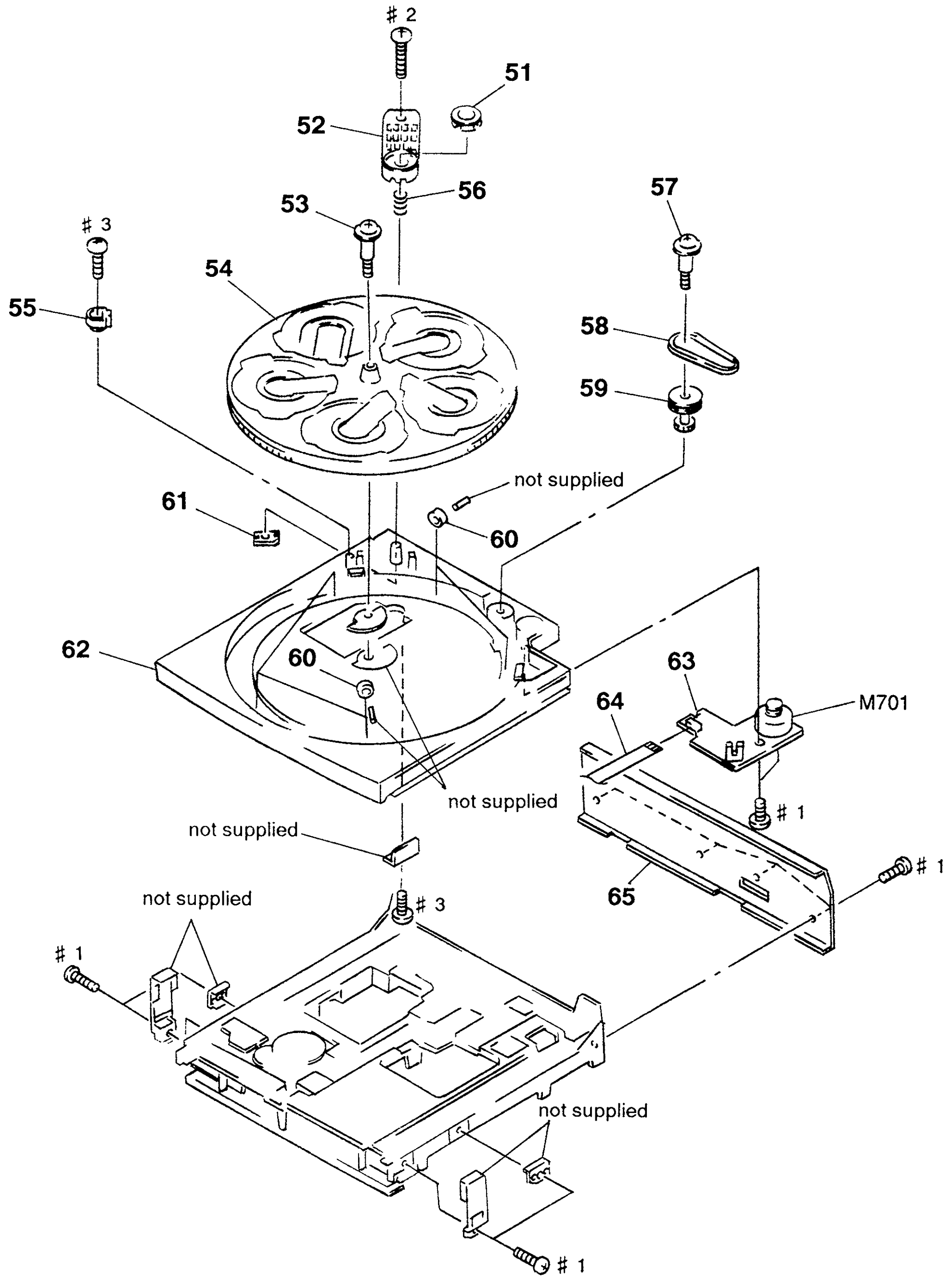
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. CASE AND FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	X-4945-742-1	PANEL ASSY, FRONT (AEP, UK, G, IT)	
1	X-4945-743-1	PANEL ASSY, FRONT (EXCEPT AEP, UK, G, IT)	
2	4-951-620-01	SCREW (2.6X8), +BVTP	
* 3	4-921-941-01	CUSHION(FL)	
* 4	1-655-482-11	PANEL BOARD	
* 5	1-655-665-11	PANEL SWITCH BOARD	
6	1-769-507-31	WIRE (FLAT TYPE) (37 CORE)	
* 7	4-955-792-21	HOLDER (5M), FL TUBE	
8	4-943-992-21	CASE	
9	3-704-366-01	SCREW (CASE) (M3X8)	
10	3-703-685-21	SCREW (+BV 3X8)	
11	4-924-410-01	FELT	
FL601	1-519-721-31	INDICATOR TUBE, FLUORESCENT	

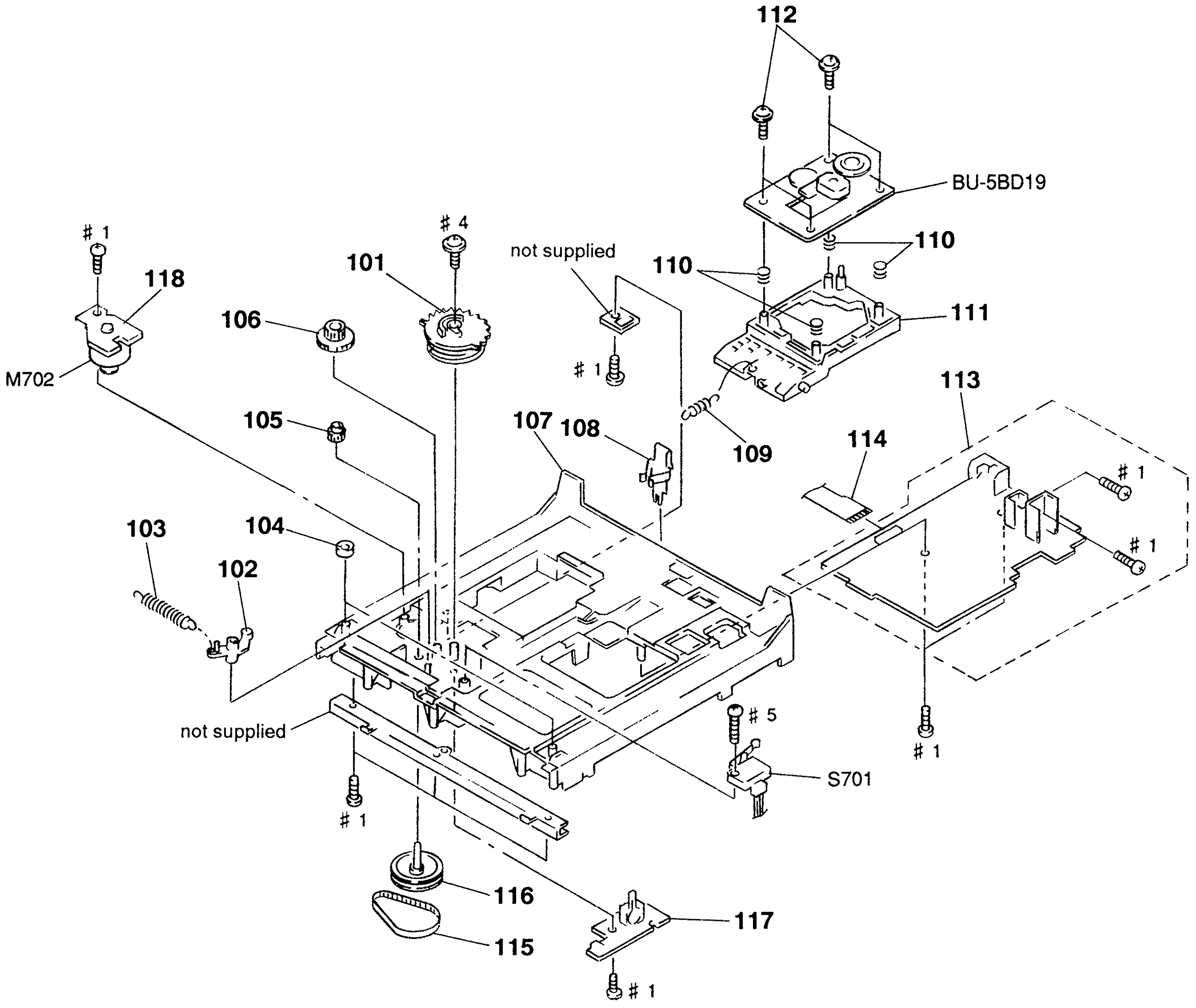
5-2. DISC TABLE SECTION



# 2
51
52
56
53
57
# 3
54
55
58
59
not supplied
61
60
62
60
63
M701
64
not supplied
not supplied
# 1
# 3
not supplied
# 1
65
# 1
not supplied
# 1

Ref. No.	Part No.	Description	Remark
* 51	1-452-538-11	MAGNET	
* 52	4-930-506-02	BRACKET (PRESS PULLEY)	
53	4-926-384-01	SCREW, STEP	
* 54	4-926-383-01	TABLE (B), DISK	
* 55	4-949-226-01	PLATE, LOCK	
56	4-926-395-01	SPRING, COMPRESSION	
57	4-923-597-01	SCREW, STEP	
58	4-926-399-01	BELT	
59	4-934-380-01	PULLEY (R)	
60	X-4924-457-1	ROLLER ASSY	
* 61	4-926-388-01	BRACKET (ADJUSTMENT)	
62	4-955-787-81	TABLE, DISC	
63	1-638-729-11	TABLE MOTOR BOARD	
64	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
* 65	4-969-794-01	PANEL, BACK (AEP, UK, G, IT)	
* 65	4-969-794-11	PANEL, BACK (E, SP, AR, MY, CH)	
* 65	4-969-794-21	PANEL, BACK (EA, MX, AUS, PX)	
M701	A-4353-976-A	MOTOR ASSY, ROTARY (TABLE)	

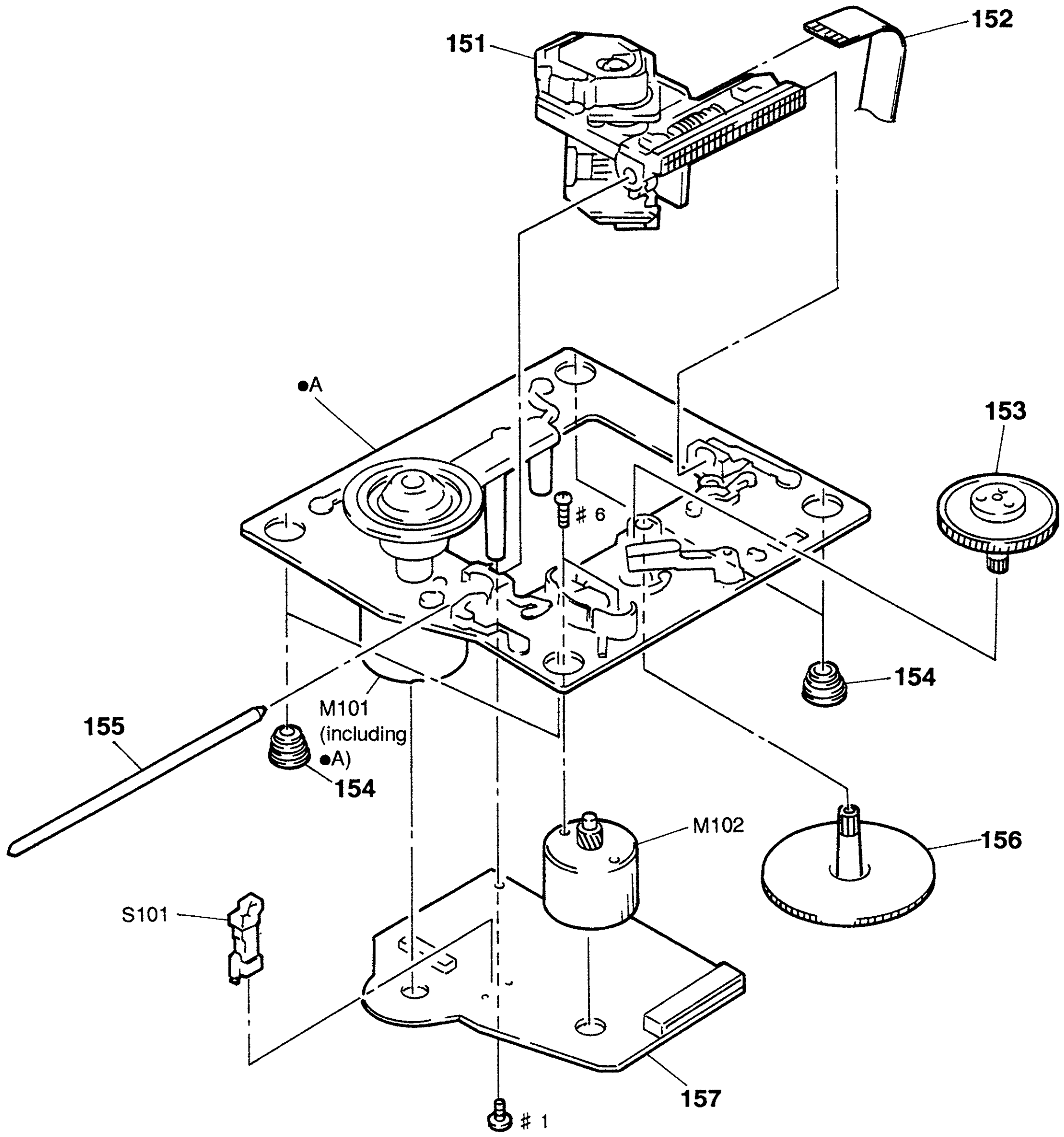
5-3. CHASSIS SECTION


112
BU-5BD19
# 1
# 4
not supplied
110
110
118
101
111
106
M702
# 1
113
105
107
108
109
114
# 1
# 1
103
104
102
not supplied
# 5
# 1
S701
# 1
116
117
115
# 1

Ref. No.	Part No.	Description	Remark
101	4-934-391-01	GEAR (LOADING A)	
102	4-917-519-01	LEVER, SET	
103	4-924-412-01	SPRING (B), TENSION	
* 104	4-951-619-01	CUSHION (A)	
105	4-934-375-01	GEAR (LOADING B)	
106	4-934-381-01	GEAR (LOADING C)	
* 107	4-943-997-31	CHASSIS	
* 108	4-943-996-06	SPRING, LEAF	
109	4-937-911-01	SPRING, TENSION	
110	4-958-593-01	SPRING (BU), COMPRESSION	
* 111	4-934-373-01	BRACKET (BU)	

Ref. No.	Part No.	Description	Remark
112	4-933-134-01	SCREW (+PTPWH M2.6X6)	
* 113	A-4673-489-A	MAIN BOARD, COMPLETE (AEP, UK, G, IT)	
* 113	A-4673-491-A	MAIN BOARD, COMPLETE (E, EA, MX, MY, AUS, PX, AR)	
* 113	A-4673-662-A	MAIN BOARD, COMPLETE (SP, CH)	
114	1-654-751-11	FLEXIBLE BOARD	
115	4-944-490-01	BELT (TIMING)	
116	X-4941-529-1	PULLEY ASSY	
117	1-638-731-11	OPEN/UP SW BOARD	
* 118	1-639-288-11	LOADING MOTOR BOARD	
M702	A-4353-974-A	MOTOR ASSY, LOADING	

5-4. BASE UNIT SECTION (BU-5BD19)


151
152
•A
153
# 6
154
M101
(including
•A)
155
154
M102
156
S101
157
# 1

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
⚠151	8-848-387-01	OPTICAL PICK UP BLOCK KSS-213BA/S-N	
152	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
153	4-917-567-01	GEAR (M)	
154	4-951-940-01	INSULATOR (BU)	
155	4-917-565-01	SHAFT, SLED	
156	4-917-564-01	GEAR (P), FLATNESS	
* 157	A-4673-402-A	BD BOARD, COMPLETE	
M101	X-4917-523-4	BASE (OUTSERT) ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB...,
  uPC...: μPC..., uPD...: μPD...

- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviation
  EA : Saudi Arabia model
  G : German model
  IT : Italian model
  MX : Mexican model
  SP : Singapore model
  MY : Malaysia model
  AUS : Australian model
  CH : Chinese model
  AR : Argentine model

Ref. No.	Part No.	Description			Remark
*	A-4673-402-A	BD BOARD, COMPLETE ******************			
		< CAPACITOR >			
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V
C102	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C106	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C107	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C113	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C114	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C117	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C118	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C119	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C120	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V
C125	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C126	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C127	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C131	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C132	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C133	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C134	1-164-346-11	CERAMIC CHIP	1uF		16V
C135	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C136	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C137	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C139	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C140	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C142	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C145	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C146	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C147	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C148	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C149	1-164-346-11	CERAMIC CHIP	1uF		16V
C153	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P			
CNU102	1-770-013-11	CONNECTOR, FFC/FPC 19P			
		< IC >			
IC101	8-752-069-56	IC	CXA1782BQ		
IC102	8-759-291-06	IC	BA6397FP		
IC103	8-752-372-94	IC	CXD2507AQ		
IC104	8-759-185-29	IC	PCM1710U-B		
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR	MSB710-R		
Q102	8-729-424-08	TRANSISTOR	UN2111		
Q103	8-729-421-22	TRANSISTOR	UN2211		
		< RESISTOR >			
R102	1-216-001-00	METAL CHIP	10	5%	1/10W
R103	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R104	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R105	1-216-089-00	METAL CHIP	47K	5%	1/10W
R106	1-216-089-00	METAL CHIP	47K	5%	1/10W
R107	1-216-089-00	METAL CHIP	47K	5%	1/10W
R108	1-216-089-00	METAL CHIP	47K	5%	1/10W
R109	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R112	1-216-077-00	METAL CHIP	15K	5%	1/10W
R113	1-216-077-00	METAL CHIP	15K	5%	1/10W
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R117	1-216-093-00	METAL CHIP	68K	5%	1/10W
R118	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R119	1-216-121-00	METAL CHIP	1M	5%	1/10W
R120	1-216-089-00	METAL CHIP	47K	5%	1/10W

Ref.No.	Part No.	Description	Remark
R121	1-216-114-00	METAL GLAZE 510K 5% 1/10W	
R122	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R123	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R124	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R125	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R126	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R127	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R128	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R129	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R130	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R131	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R132	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R133	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R134	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R135	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R136	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R137	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R138	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R139	1-216-033-00	METAL CHIP 220 5% 1/10W	
R140	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R141	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R142	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R143	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R144	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R145	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R146	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R147	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R148	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R149	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R150	1-216-037-00	METAL CHIP 330 5% 1/10W	
R151	1-216-037-00	METAL CHIP 330 5% 1/10W	
R152	1-216-037-00	METAL CHIP 330 5% 1/10W	
R153	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R154	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R156	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R157	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R158	1-216-001-00	METAL CHIP 10 5% 1/10W	
		< VARIABLE RESISTOR >	
RV101	1-241-396-11	RES, ADJ, METAL GLAZE 22K	
RV102	1-241-396-11	RES, ADJ, METAL GLAZE 22K	
RV103	1-241-396-11	RES, ADJ, METAL GLAZE 22K	
		< SWITCH >	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
		< VIBRATOR >	
X101	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)	

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Ref.No.	Part No.	Description	Remark
	1-638-729-11	TABLE MOTOR BOARD *****************	
*	1-639-288-11	LOADING MOTOR BOARD *******************	
	1-638-731-11	OPEN/UP SW BOARD ****************	
		< CAPACITOR >	
C704	1-162-302-11	CERAMIC 0.0022uF 30% 16V	
C705	1-162-302-11	CERAMIC 0.0022uF 30% 16V	
		< CONNECTOR >	
* CN705	1-566-214-11	PIN, CONNECTOR (PC BOARD) 2P	
* CN707	1-573-044-11	SOCKET, CONNECTOR 5P	
		< DIODE >	
D701	8-719-970-19	DIODE GP-1A521	
		< RESISTOR >	
R701	1-249-416-11	CARBON 820 5% 1/4W	F
		< SWITCH >	
S702	1-571-300-21	SWITCH, ROTARY (OPEN/UP DET)	

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Ref.No.	Part No.	Description	Remark
*	A-4673-489-A	MAIN BOARD, COMPLETE (AEP, UK, G, IT) **********************************	
*	A-4673-491-A	MAIN BOARD, COMPLETE (E, EA, MX, PX, AUS, AR, MY) **	
*	A-4673-662-A	MAIN BOARD, COMPLETE (SP, CH) ***************************	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
		< CAPACITOR >	
C1	1-164-159-11	CERAMIC 0.1uF 50V	
C2	1-164-159-11	CERAMIC 0.1uF 50V	
C3	1-164-159-11	CERAMIC 0.1uF 50V	
C4	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C5	1-164-159-11	CERAMIC 0.1uF 50V	
C6	1-164-159-11	CERAMIC 0.1uF 50V	
C7	1-161-494-00	CERAMIC 0.022uF 25V	
C8	1-162-290-31	CERAMIC 470PF 10% 50V	
C9	1-162-290-31	CERAMIC 470PF 10% 50V	
C10	1-162-290-31	CERAMIC 470PF 10% 50V	
C11	1-162-290-31	CERAMIC 470PF 10% 50V	

MAIN

Ref.No.	Part No.	Description				Remark
C12	1-162-290-31	CERAMIC	470PF	10%	50V	
C13	1-162-290-31	CERAMIC	470PF	10%	50V	
C14	1-162-282-31	CERAMIC	100PF	10%	50V	
C15	1-164-159-11	CERAMIC	0.1uF		50V	
C19	1-126-943-11	ELECT	2200uF	20%	25V	(SP)
C201	1-124-907-11	ELECT	10uF	20%	50V	
C202	1-124-465-00	ELECT	0.47uF	20%	50V	
C203	1-126-923-11	ELECT	220uF	20%	10V	
C204	1-124-478-11	ELECT	100uF	20%	25V	
C205	1-162-215-31	CERAMIC	47PF	5%	50V	
C206	1-164-159-11	CERAMIC	0.1uF		50V	
C207	1-164-159-11	CERAMIC	0.1uF		50V	
C208	1-128-548-11	ELECT	4700uF	20%	25V	
C209	1-128-548-11	ELECT	4700uF	20%	25V	
C210	1-126-969-11	ELECT	220uF	20%	50V	
C211	1-128-576-11	ELECT	100uF	20%	63V	
C212	1-126-947-11	ELECT	47uF	20%	35V	
C213	1-124-907-11	ELECT	10uF	20%	50V	
C214	1-126-941-11	ELECT	470uF	20%	25V	
C215	1-124-443-00	ELECT	100uF	20%	10V	
C217	1-124-463-00	ELECT	0.1uF	20%	50V	
C218	1-124-916-11	ELECT	22uF	20%	63V	
C219	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C220	1-104-664-11	ELECT	47uF	20%	16V	
C221	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C222	1-126-925-11	ELECT	470uF	20%	10V	
C223	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C224	1-124-907-11	ELECT	10uF	20%	50V	
C225	1-164-159-11	CERAMIC	0.1uF		50V	
C226	1-124-903-11	ELECT	1uF	20%	50V	
C227	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C228	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C229	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C231	1-126-925-11	ELECT	470uF	20%	10V	
C255	1-162-215-31	CERAMIC	47PF	5%	50V	
C257	1-136-177-00	FILM	1uF	5%	50V	
C266	1-124-463-00	ELECT	0.1uF	20%	50V	
C269	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C270	1-104-664-11	ELECT	47uF	20%	16V	
C271	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C273	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C274	1-124-907-11	ELECT	10uF	20%	50V	
C276	1-124-903-11	ELECT	1uF	20%	50V	
C306	1-124-903-11	ELECT	1uF	20%	50V	
C801	1-162-207-31	CERAMIC	22PF	5%	50V	
C802	1-162-207-31	CERAMIC	22PF	5%	50V	
C803	1-162-207-31	CERAMIC	22PF	5%	50V	
C804	1-162-207-31	CERAMIC	22PF	5%	50V	
C805	1-162-207-31	CERAMIC	22PF	5%	50V	
C806	1-162-207-31	CERAMIC	22PF	5%	50V	

Ref.No.	Part No.	Description				Remark
C807	1-162-207-31	CERAMIC	22PF	5%	50V	
C808	1-162-207-31	CERAMIC	22PF	5%	50V	
C809	1-162-207-31	CERAMIC	22PF	5%	50V	
C810	1-162-207-31	CERAMIC	22PF	5%	50V	
C811	1-162-207-31	CERAMIC	22PF	5%	50V	
C812	1-162-207-31	CERAMIC	22PF	5%	50V	
C813	1-162-207-31	CERAMIC	22PF	5%	50V	
C814	1-162-207-31	CERAMIC	22PF	5%	50V	
C815	1-162-207-31	CERAMIC	22PF	5%	50V	
C816	1-162-207-31	CERAMIC	22PF	5%	50V	
C817	1-162-207-31	CERAMIC	22PF	5%	50V	
C818	1-162-207-31	CERAMIC	22PF	5%	50V	
C819	1-162-207-31	CERAMIC	22PF	5%	50V	
C820	1-162-207-31	CERAMIC	22PF	5%	50V	
C821	1-162-207-31	CERAMIC	22PF	5%	50V	
C822	1-162-207-31	CERAMIC	22PF	5%	50V	
C823	1-162-207-31	CERAMIC	22PF	5%	50V	
C824	1-162-207-31	CERAMIC	22PF	5%	50V	
C825	1-162-207-31	CERAMIC	22PF	5%	50V	
C826	1-162-207-31	CERAMIC	22PF	5%	50V	
C827	1-162-207-31	CERAMIC	22PF	5%	50V	
C828	1-162-207-31	CERAMIC	22PF	5%	50V	
C829	1-162-207-31	CERAMIC	22PF	5%	50V	

< CONNECTOR >

Ref.No.	Part No.	Description
* CN201	1-568-862-11	SOCKET, CONNECTOR 19P
* CN202	1-691-902-21	CONNECTOR, FFC/FPC 37P
* CN203	1-568-943-11	PIN, CONNECTOR 5P
CN204	1-764-017-11	HOUSING, CONNECTOR(PC BOARD)17P
* CN205	1-568-824-11	SOCKET, CONNECTOR 5P

< DIODE >

Ref.No.	Part No.	Description	
D1	8-719-000-75	DIODE	UZL-7L1
D201	8-719-987-63	DIODE	1N4148M
D202	8-719-010-42	DIODE	UZ-5.6BSB
D204	8-719-000-75	DIODE	UZL-7L1
D205	8-719-024-99	DIODE	11ES2-NTA2B
D206	8-719-024-99	DIODE	11ES2-NTA2B
D207	8-719-013-67	DIODE	UZ-30BSD
D208	8-719-010-33	DIODE	UZ-4.7BSB
D210	8-719-024-99	DIODE	11ES2-NTA2B
D211	8-719-024-99	DIODE	11ES2-NTA2B
D212	8-719-024-99	DIODE	11ES2-NTA2B
D213	8-719-024-99	DIODE	11ES2-NTA2B
D218	8-719-987-63	DIODE	1N4148M
D219	8-719-024-99	DIODE	11ES2-NTA2B
D220	8-719-024-99	DIODE	11ES2-NTA2B
D221	8-719-024-99	DIODE	11ES2-NTA2B
D222	8-719-024-99	DIODE	11ES2-NTA2B
D227	8-719-024-99	DIODE	11ES2-NTA2B
D228	8-719-024-99	DIODE	11ES2-NTA2B

Ref. No.	Part No.	Description	Remark
D229	8-719-024-99	DIODE 11ES2-NTA2B	
D230	8-719-024-99	DIODE 11ES2-NTA2B	

< IC >

Ref. No.	Part No.	Description	Remark
IC202	8-759-820-84	IC L78MR05	
IC203	8-759-071-48	IC TA7807S	
IC204	8-759-172-31	IC BA6191	
IC205	8-759-634-51	IC M5218AP	
IC301	8-759-332-67	IC uPD78044AGF-101-3B9	

< COIL >

Ref. No.	Part No.	Description	Remark
L201	1-410-322-11	INDUCTOR 3.3uH	
L202	1-410-517-11	INDUCTOR 47uH	
L204	1-412-473-21	INDUCTOR 0uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q201	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q202	8-729-422-57	TRANSISTOR UN4111	
Q203	8-729-900-80	TRANSISTOR DTC114ES	
Q204	8-729-030-19	TRANSISTOR 2SB1640 (SP,CH)	
Q205	8-729-119-78	TRANSISTOR 2SC403SP-51	(EXCEPT SP,CH)
Q206	8-729-140-04	TRANSISTOR 2SB1116A-L	(EXCEPT AEP,UK,G,IT)
Q207	8-729-900-80	TRANSISTOR DTC114ES	(EXCEPT AEP,UK,G,IT)
Q208	8-729-140-04	TRANSISTOR 2SB1116A-L	(EXCEPT SP,CH)
Q251	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q301	8-729-900-80	TRANSISTOR DTC114ES	
Q303	8-729-900-63	TRANSISTOR DTA124ES	
Q304	8-729-119-78	TRANSISTOR 2SC403SP-51	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
⚠R200	1-219-139-11	FUSIBLE 0.68 10% 1/4W	
R201	1-249-417-11	CARBON 1K 5% 1/4W	F
R202	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R203	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R204	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R205	1-249-441-11	CARBON 100K 5% 1/4W	
R206	1-249-417-11	CARBON 1K 5% 1/4W	F
R207	1-249-429-11	CARBON 10K 5% 1/4W	
R208	1-249-441-11	CARBON 100K 5% 1/4W	
R209	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R210	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R211	1-249-431-11	CARBON 15K 5% 1/4W	
R212	1-249-441-11	CARBON 100K 5% 1/4W	
R214	1-249-393-11	CARBON 10 5% 1/4W	F
R215	1-249-429-11	CARBON 10K 5% 1/4W	(EXCEPT AEP,UK,G,IT)
R217	1-249-429-11	CARBON 10K 5% 1/4W	
R218	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R219	1-249-429-11	CARBON 10K 5% 1/4W	
R220	1-249-441-11	CARBON 100K 5% 1/4W	
⚠R221	1-212-881-11	FUSIBLE 100 5% 1/4W	F (EXCEPT SP,CH)
R222	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R228	1-247-834-11	CARBON 1.3K 5% 1/4W	
R229	1-249-415-11	CARBON 680 5% 1/4W	F
R230	1-249-424-11	CARBON 3.9K 5% 1/4W	F
R231	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R232	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R233	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R234	1-249-429-11	CARBON 10K 5% 1/4W	(EXCEPT AEP,UK,G,IT)
R235	1-249-441-11	CARBON 100K 5% 1/4W	
R236	1-249-441-11	CARBON 100K 5% 1/4W	
R237	1-249-441-11	CARBON 100K 5% 1/4W	
R238	1-249-441-11	CARBON 100K 5% 1/4W	
R239	1-249-441-11	CARBON 100K 5% 1/4W	
R240	1-249-441-11	CARBON 100K 5% 1/4W	
R241	1-249-441-11	CARBON 100K 5% 1/4W	
R242	1-249-441-11	CARBON 100K 5% 1/4W	
R243	1-249-441-11	CARBON 100K 5% 1/4W	
R244	1-249-441-11	CARBON 100K 5% 1/4W	
R245	1-249-441-11	CARBON 100K 5% 1/4W	
R246	1-249-441-11	CARBON 100K 5% 1/4W	
R247	1-249-441-11	CARBON 100K 5% 1/4W	
R248	1-249-441-11	CARBON 100K 5% 1/4W	
R249	1-249-441-11	CARBON 100K 5% 1/4W	
R250	1-249-417-11	CARBON 1K 5% 1/4W	F
R253	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R254	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R255	1-249-441-11	CARBON 100K 5% 1/4W	
R256	1-249-417-11	CARBON 1K 5% 1/4W	F
R257	1-249-429-11	CARBON 10K 5% 1/4W	
R258	1-249-441-11	CARBON 100K 5% 1/4W	
R259	1-249-437-11	CARBON 47K 5% 1/4W	
R260	1-249-437-11	CARBON 47K 5% 1/4W	
R270	1-249-441-11	CARBON 100K 5% 1/4W	
R301	1-249-429-11	CARBON 10K 5% 1/4W	
R302	1-249-429-11	CARBON 10K 5% 1/4W	
R303	1-249-429-11	CARBON 10K 5% 1/4W	
R304	1-249-429-11	CARBON 10K 5% 1/4W	
R305	1-249-429-11	CARBON 10K 5% 1/4W	
R306	1-249-417-11	CARBON 1K 5% 1/4W	F
R307	1-249-417-11	CARBON 1K 5% 1/4W	F
R308	1-247-807-31	CARBON 100 5% 1/4W	
R309	1-249-417-11	CARBON 1K 5% 1/4W	F
R310	1-247-807-31	CARBON 100 5% 1/4W	
R311	1-247-807-31	CARBON 100 5% 1/4W	
R312	1-247-807-31	CARBON 100 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN PANEL PANEL SWITCH

Ref. No.	Part No.	Description	Remark
R313	1-247-807-31	CARBON 100 5% 1/4W	
R314	1-247-807-31	CARBON 100 5% 1/4W	
R315	1-247-807-31	CARBON 100 5% 1/4W	
R316	1-249-417-11	CARBON 1K 5% 1/4W F	
R317	1-249-441-11	CARBON 100K 5% 1/4W	
R318	1-249-441-11	CARBON 100K 5% 1/4W	
R319	1-247-807-31	CARBON 100 5% 1/4W	
R320	1-247-807-31	CARBON 100 5% 1/4W	
R321	1-249-417-11	CARBON 1K 5% 1/4W F	
R322	1-247-807-31	CARBON 100 5% 1/4W	
R323	1-247-807-31	CARBON 100 5% 1/4W	
R324	1-249-417-11	CARBON 1K 5% 1/4W F	
R325	1-249-417-11	CARBON 1K 5% 1/4W F	
R326	1-249-417-11	CARBON 1K 5% 1/4W F	
R338	1-249-429-11	CARBON 10K 5% 1/4W	
R341	1-247-807-31	CARBON 100 5% 1/4W	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X301	1-579-233-11	VIBRATOR, CERAMIC (5MHz)	

****

Ref. No.	Part No.	Description	Remark
*	1-655-482-11	PANEL BOARD ***********	
*	1-655-665-11	PANEL SWITCH BOARD ******************	
*	4-955-792-21	HOLDER (5M), FL TUBE	

< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C601	1-164-159-11	CERAMIC 0.1uF 50V	
C602	1-164-159-11	CERAMIC 0.1uF 50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN202	1-691-902-21	CONNECTOR, FFC/FPC 37P	

< DIODE >

Ref. No.	Part No.	Description	Remark
D601	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)	
D602	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)	
D603	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)	
D604	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)	
D605	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)	

< FLUORESCENT INDIATOR >

Ref. No.	Part No.	Description	Remark
FL601	1-519-721-31	INDICATOR TUBE, FLUORESCENT	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R601	1-249-413-11	CARBON 470 5% 1/4W F	
R602	1-249-415-11	CARBON 680 5% 1/4W F	
R603	1-249-417-11	CARBON 1K 5% 1/4W F	
R604	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R605	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R606	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R607	1-249-413-11	CARBON 470 5% 1/4W F	
R608	1-249-415-11	CARBON 680 5% 1/4W F	
R609	1-249-417-11	CARBON 1K 5% 1/4W F	
R610	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R611	1-249-413-11	CARBON 470 5% 1/4W F	
R612	1-249-415-11	CARBON 680 5% 1/4W F	
R613	1-249-417-11	CARBON 1K 5% 1/4W F	
R614	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R615	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R616	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R617	1-249-430-11	CARBON 12K 5% 1/4W	
R618	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R619	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R620	1-249-430-11	CARBON 12K 5% 1/4W	
R621	1-249-430-11	CARBON 12K 5% 1/4W	
R622	1-249-401-11	CARBON 47 5% 1/4W F (EXCEPT AEP, UK, G, IT)	
R623	1-249-401-11	CARBON 47 5% 1/4W F (EXCEPT AEP, UK, G, IT)	
R624	1-249-408-11	CARBON 180 5% 1/4W F (EXCEPT AEP, UK, G, IT)	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S601	1-571-760-11	SWITCH, KEY BOARD (TIME)	
S602	1-571-760-11	SWITCH, KEY BOARD (CONTINUE)	
S603	1-571-760-11	SWITCH, KEY BOARD (SHUFFLE)	
S604	1-571-760-11	SWITCH, KEY BOARD (PROGRAM)	
S605	1-571-760-11	SWITCH, KEY BOARD (■)	
S606	1-571-760-11	SWITCH, KEY BOARD (⏏ OPEN/CLOSE)	
S607	1-571-760-11	SWITCH, KEY BOARD (DISC SKIP)	
S608	1-571-760-11	SWITCH, KEY BOARD (⏮ ◀◀)	
S609	1-571-760-11	SWITCH, KEY BOARD (▷)	
S610	1-571-760-11	SWITCH, KEY BOARD (❚❚)	
S611	1-571-760-11	SWITCH, KEY BOARD (DISC 1)	
S612	1-571-760-11	SWITCH, KEY BOARD (▶▶ ⏭)	
S613	1-571-760-11	SWITCH, KEY BOARD (DISC 2)	
S614	1-571-760-11	SWITCH, KEY BOARD (DISC 3)	
S615	1-571-760-11	SWITCH, KEY BOARD (DISC 4)	
S616	1-571-760-11	SWITCH, KEY BOARD (DISC 5)	

****

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		*************	
6	1-769-507-31	WIRE (FLAT TYPE) (37 CORE)	
* 51	1-452-538-11	MAGNET	
64	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
114	1-654-751-11	FLEXIBLE BOARD	
⚠151	8-848-387-01	OPTICAL PICK UP BLOCK KSS-213BA/S-N	
152	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
FL601	1-519-721-31	INDICATOR TUBE, FLUORESCENT	
M101	X-4917-523-4	BASE (OUTSERT) ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M701	A-4353-976-A	MOTOR ASSY, ROTARY (TABLE)	
M702	A-4353-974-A	MOTOR ASSY, LOADING	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR)(DOWN DET)	
***			
	ACCESSORIES & PACKING MATERIALS		
	*******************************		
	4-937-945-01	PLATE (TRANSPORT), LOCK	
*	4-973-916-01	CUSHION (FRONT)	
*	4-973-917-01	CUSHION (REAR)	
***			
		*******************	
		HARDWARE LIST	
		*******************	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-682-554-04	SCREW +B 3X25	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#4	7-682-961-01	SCREW +PSW 4X8	
#5	7-685-136-19	SCREW +P 2.6X12 TYPE2 NON-SLIT	
#6	7-621-255-15	SCREW +P 2X3	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

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Quality Engineering Dept.

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Consumer A&V Products Company
Home A&V Products Div.

9-960-243-11

SS-LB500/LB650V

SERVICE MANUAL

Photo : L-CH

E Model
Australian Model
SS-LB500/LB650V

PX Model
SS-LB500

Chinese Model
SS-LB650V

SS-LB500 is the speaker system in LBT-N550/N550K/N550P.

SS-LB650V is the speaker system in SS-LB650CR and LBT-N550K.

SPECIFICATIONS

SS-LB500

Type	3-way speaker system
Speaker unit	Woofer : 22 cm, cone type Tweeter : 6 cm, cone type Super tweeter : 2 cm, cone type
Rated impedance	6 ohms
Enclosure	Bass reflex
Dimension	280 × 481 × 271 mm (w/h/d)
Grill	Remove
Typeinput terminal	Terminal board
Weight	Approx. 6.2 kg/pc

SS-LB650V

Type	3-way speaker system Magnetically shielded type
Speaker unit	Woofer : 22 cm, cone type Tweeter : 6 cm, cone type Super tweeter : 2 cm, cone type
Rated impedance	6 ohms
Enclosure	Bass reflex
Dimension	280 × 481 × 271 mm (w/h/d)
Grill	Remove
Typeinput terminal	Terminal board
Weight	Approx. 6.4 kg/pc

Design and specifications subject to change without notice.

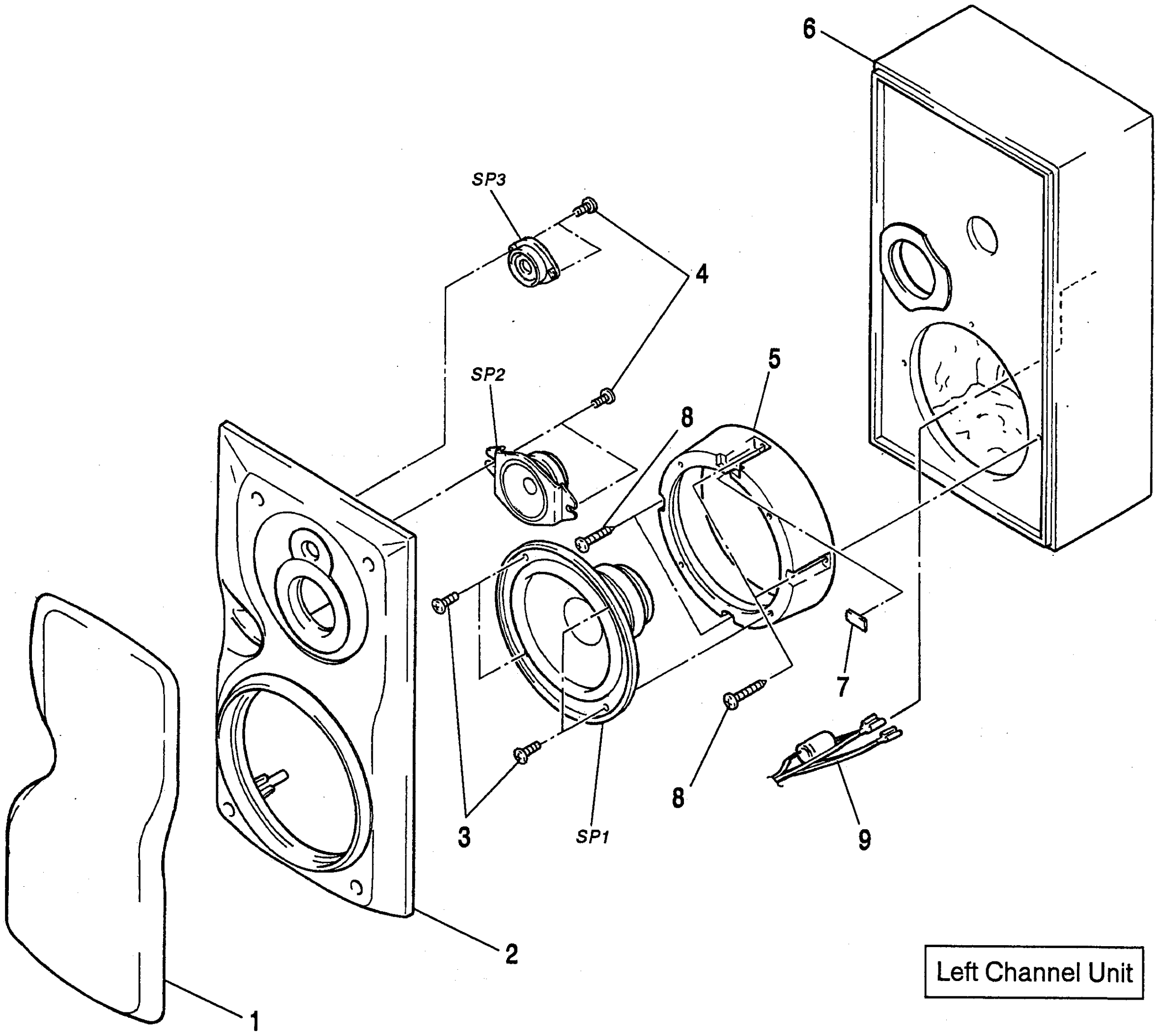
3-WAY SPEAKER SYSTEM

SONY®

EXPLODED VIEW AND PARTS LIST

NOTE :

- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.



Ref. No.	Part No.	Description	Remark
1	X-4945-663-1	FRAME (L) ASSY, GRILLE	
1	X-4945-664-1	FRAME (R) ASSY, GRILLE	
2	X-4945-661-1	PANEL (L) ASSY, FRONT (LB500)	
2	X-4945-662-1	PANEL (R) ASSY, FRONT (LB500)	
2	X-4946-346-1	PANEL (L) ASSY, FRONT (LB650V)	
2	X-4946-347-1	PANEL (R) ASSY, FRONT (LB650V)	
3	7-685-661-79	SCREW +BVTP 4×12 TYPE N-S	
4	7-685-659-79	SCREW +BVTP 4×8 TYPE N-S	
5	4-970-450-01	RING WOOFER	
* 6	A-4361-379-A	CABINET (L) ASSY, SPEAKER	
* 6	A-4361-380-A	CABINET (R) ASSY, SPEAKER	
7	9-911-840-XX	PACKING	
8	4-936-542-01	SCREW (4×20), TAPPING, +B	
9	1-558-848-11	CORD, SPEAKER	

Ref. No.	Part No.	Description	Remark
SP1	1-544-752-11	SPEAKER (20cm) (LB500)	
SP1	1-504-945-11	SPEAKER (20cm) (LB650V)	
SP2	1-504-677-11	SPEAKER (6cm)	
SP3	1-504-805-11	SPEAKER (2cm)	
		PACKING & MATERIALS	
*	4-974-071-01	CUSHION	
*	4-974-070-01	INDIVIDUAL CARTON (LB500:AUS, PX)	
*	4-975-728-01	INDIVIDUAL CARTON (LB500:E)	
*	4-975-729-01	INDIVIDUAL CARTON (LB500:MX)	
*	4-976-488-01	INDIVIDUAL CARTON (LB650V)	

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

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Quality Engineering Dept.

PS-LX56/LX56P

SERVICE MANUAL

Ver 1.1 2001. 07

US Model
Canadian Model
PX Model
Tourist Model
PS-LX56
AEP Model
E Model
Australian Model
PS-LX56/LX56P
UK Model
PS-LX56P

PS-LX56/LX56P are the turntable section in LBT-A190/A195/A290/A290K/A295/A390/A390K/A395/A490/A490K/A495/D150/D250/D550/G1000/G2000.

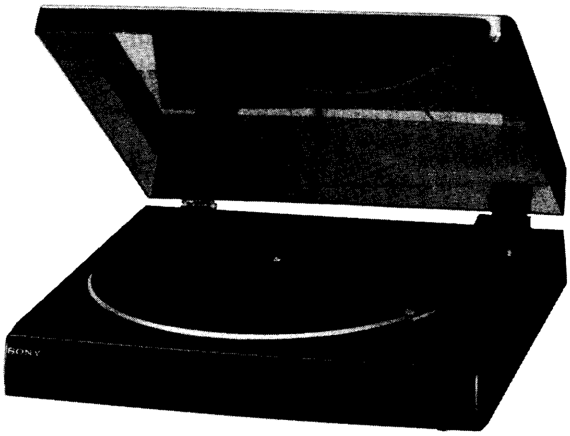

PHOTO : PS-LX56

SPECIFICATIONS

Turntable	**(PS-LX56)**
Platter	30cm (12 in.)
Motor	DC servo motor
Drive system	Belt drive
Speed	33 1/3 rpm/45 rpm switchable
Wow and flutter	0.2% (WRMS)
Signal-to-noise ratio	60 dB (DIN-B)
Automatic system	Return, reject
Tonearm	
Type	Dynamically blanced
Pivot-to-stylus length	203 mm (8 in.)
Overall arm length	235 mm (9 1/4 in.)
Cartridge	
Type	Moving magnet type
Frequency response	20 Hz-20kHz
Stylus	CN-234
General	
Dimensions	355 × 94 × 345 mm(w/h/d) (14 × 3^3/$_4$ × 13^5/$_8$ inches)
Weight	Approx. 2.5 kg (5 lb 8 oz)
Power requirement	US and Canadian model : 120V AC, 60Hz European model : 220-230V AC, 50/60Hz Australian model : 240V AC, 50Hz Model for other countries : 110-120V/220-240V adjustable with the voltage selector AC, 50/60Hz
Power consumption	2 W
Accessory supplied	45-rpm adaptor (1)
Optional accessories	Replacement stylus CN-234 Stat spray XP-C10 Cleaner XP-C1, XP-C2

Turntable	**(PS-LX56P)**
Platter	30 cm
Tone arm type	Dynamically balanced
Cartridge type	Moving magnet type
Stylus	Sony CN-234 (0.6 mil diamond)
Mass	Approx. 2.3 kg (5 lb 1 oz)
Dimensions	Approx. 355 x 95 x 345 mm (14 x 3^3/$_4$ x 13^5/$_8$ inches) (w/h/d, including projections)

Design and specifications subject to change without notice.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

STEREO TURNTABLE SYSTEM

SONY®

9-959-216-12
2001G0200-1
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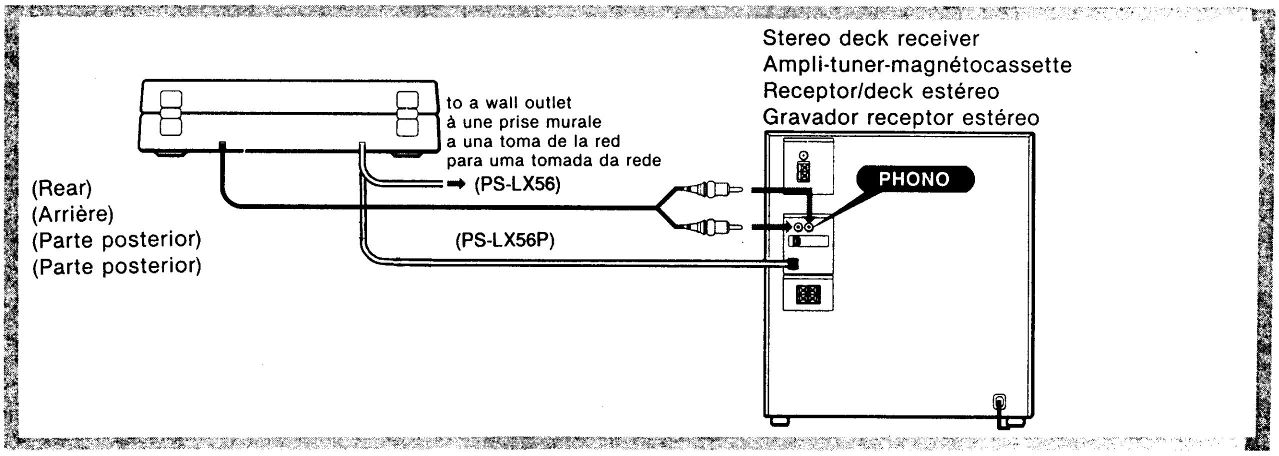
Home Audio Company
Shinagawa Tec Service Manual Production Group

Connections

Note
Connect the red plug to the right-channel jack (R), and the white plug to the left-channel jack (L).


Stereo deck receiver
Ampli-tuner-magnétocassette
Receptor/deck estéreo
Gravador receptor estéreo
to a wall outlet
à une prise murale
a una toma de la red
para uma tomada da rede
(PS-LX56)
(PS-LX56P)
PHONO
(Rear)
(Arrière)
(Parte posterior)
(Parte posterior)

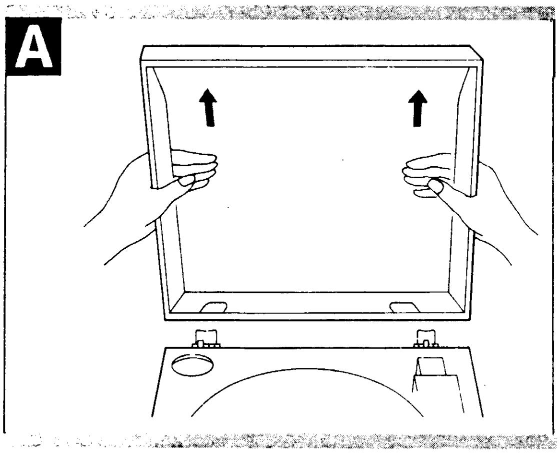
Nota
Conecte la clavija roja a la toma del canal derecho (R), y la blanca a la del canal izquierdo (L).

Notes on installation

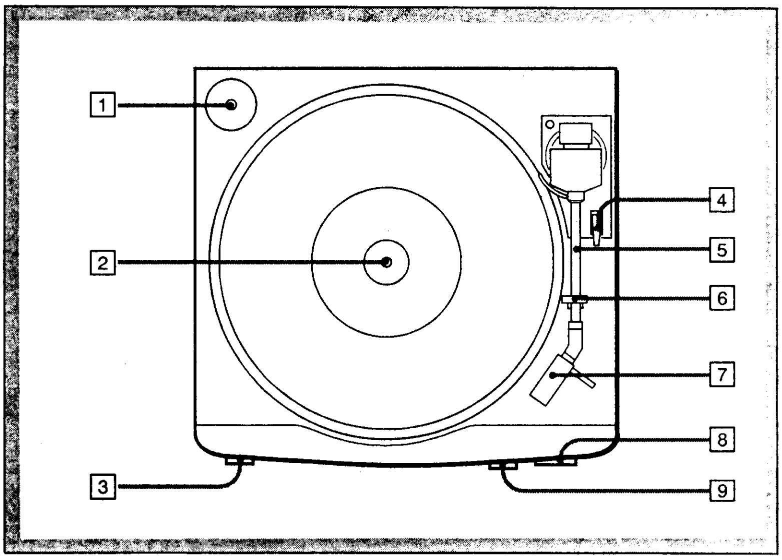
- Place the turntable on a level surface.
- Avoid placing the unit near electrical appliances (such as a television, hair dryer, or fluorescent lamp) which may cause hum or noise.
- Place the turntable where it will not be subject to any vibration, such as from speakers, slamming of doors, etc.
- Keep the unit away from direct sunlight, extremes of temperature, and excessive dust and moisture.

To remove the dust cover A

Open the cover fully and pull it up.

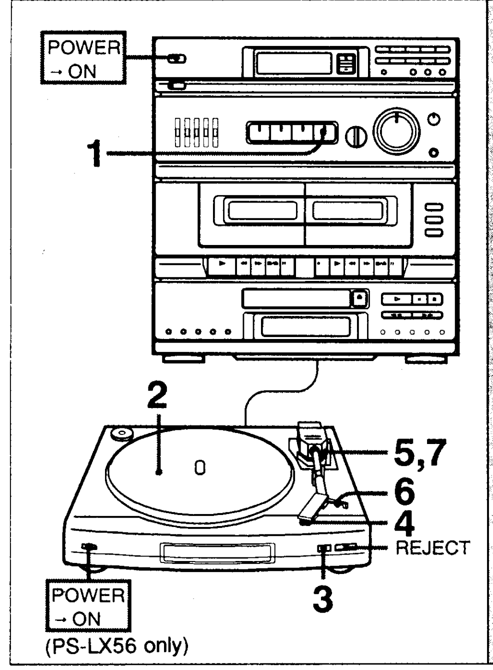


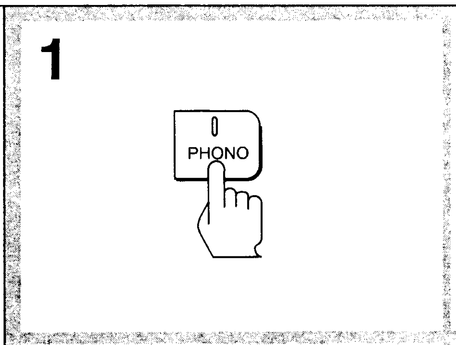
Location of Controls

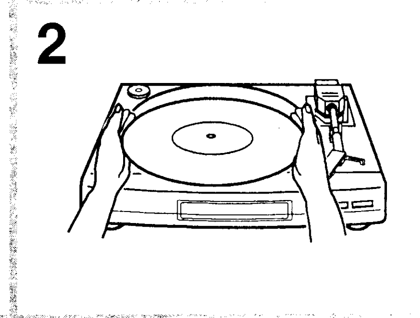


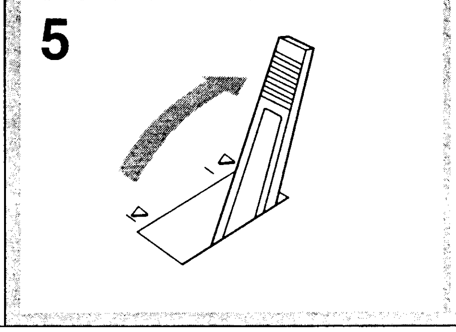
1 45-rpm adaptor
2 Centre spindle
3 POWER switch (PS-LX56)
4 Cueing lever
5 Tonearm
6 Armrest
7 Cartridge
8 REJECT button
9 Speed selector

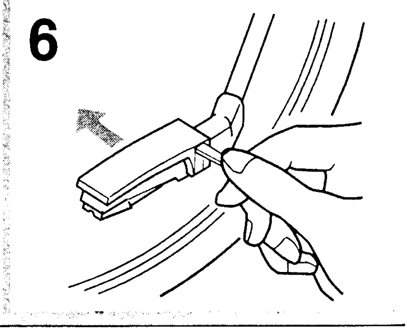
Playing Records

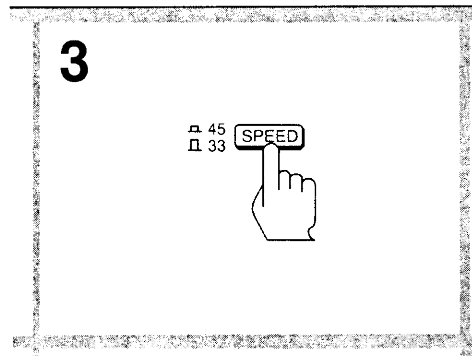

POWER → ON
1
2
5,7
6
4
REJECT
3
POWER → ON
(PS-LX56 only)







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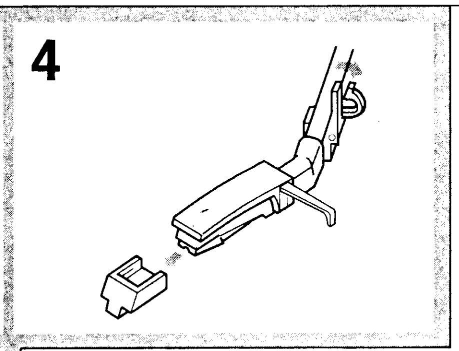
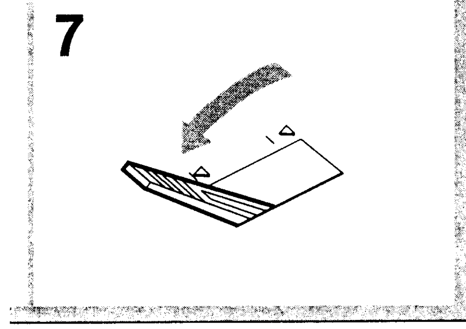
45
33
SPEED





When the record is played to the end, the tonearm returns to the armrest and the turntable stops.

To stop during play, press REJECT.

To play a different part of the record
Lift the tonearm by setting the cueing level to ▼, move the tonearm by hand to the desired point, then set the cueing lever to ▼.

To play a 17-cm record
Use the supplied adaptor

If the tonearm moves outward when you move it colse to the centre
Do not resist this movement, as it may damage the automatic return mechanism.

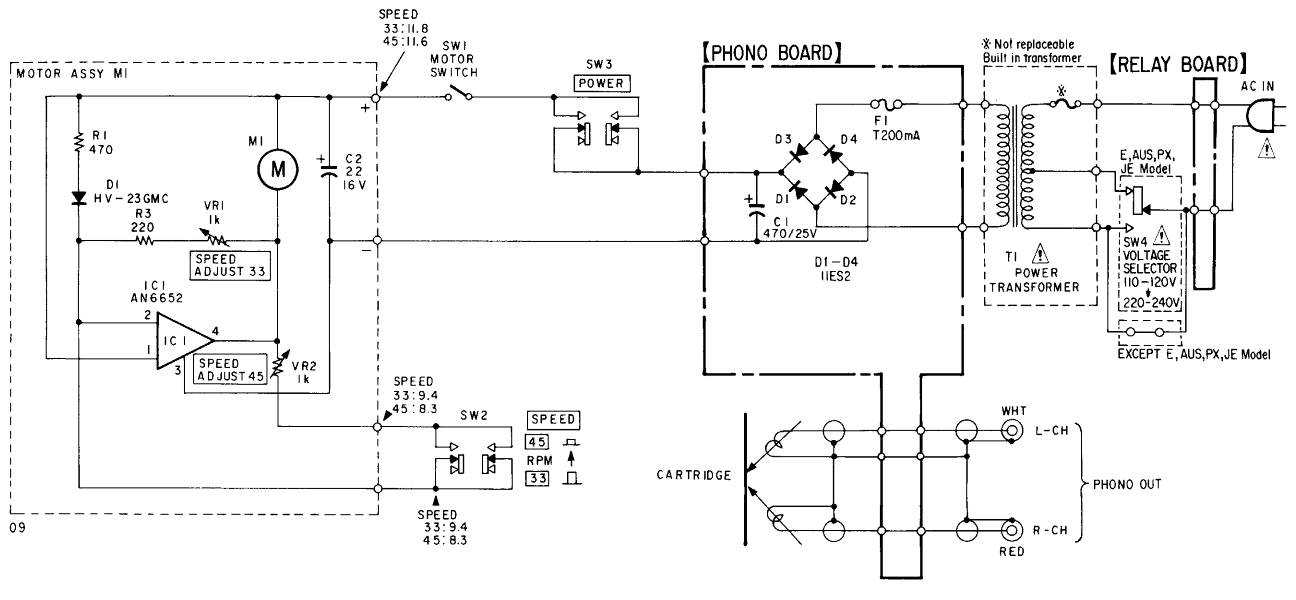
If the tonearm does not return to its armrest
Press REJECT.

SCHEMATIC DIAGRAMS

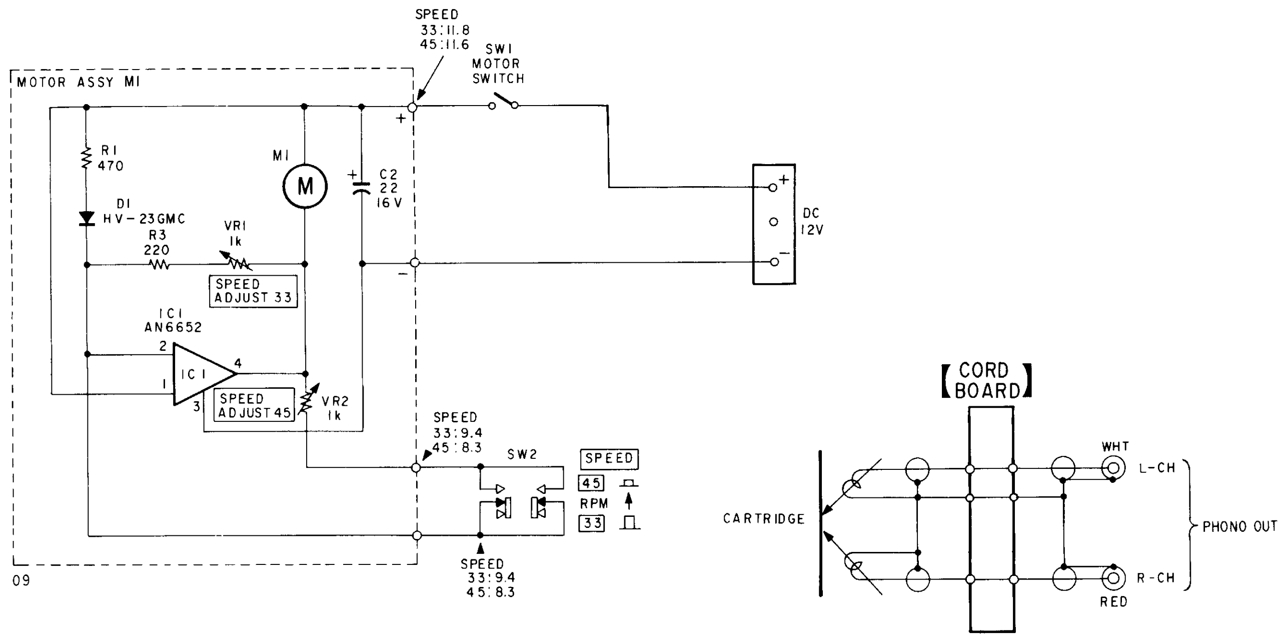
(PS-LX56)

• Switches :

Ref. No.	Switch	Position
SW1	MOTOR	OFF
SW2	SPEED	33
SW3	POWER	OFF


MOTOR ASSY MI
R1 470
D1 HV-23GMC
R3 220
VR1 1k
SPEED ADJUST 33
M1
M
C2 22 16V
IC1 AN6652
IC1
SPEED ADJUST 45
VR2 1k
SPEED 33:11.8 45:11.6
SW1 MOTOR SWITCH
SW3 POWER
SPEED 33:9.4 45:8.3
SW2
SPEED
45
RPM
33
09
【PHONO BOARD】
F1 T200mA
D3 D4 D1 D2
C1 470/25V
D1–D4 11ES2
※ Not replaceable Built in transformer
T1 POWER TRANSFORMER
【RELAY BOARD】
AC IN
E,AUS,PX, JE Model
SW4 VOLTAGE SELECTOR 110–120V 220–240V
EXCEPT E,AUS,PX,JE Model
CARTRIDGE
WHT
L-CH
PHONO OUT
R-CH
RED

(PS-LX56P)


MOTOR ASSY MI
R1 470
D1 HV-23GMC
R3 220
VR1 1k
SPEED ADJUST 33
M1
M
C2 22 16V
IC1 AN6652
IC1
SPEED ADJUST 45
VR2 1k
SPEED 33:11.8 45:11.6
SW1 MOTOR SWITCH
DC 12V
SPEED 33:9.4 45:8.3
SW2
SPEED
45
RPM
33
09
【CORD BOARD】
CARTRIDGE
WHT
L-CH
PHONO OUT
R-CH
RED

Note:
- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

AUS : Australian model
JE : Tourist model

• Switches :

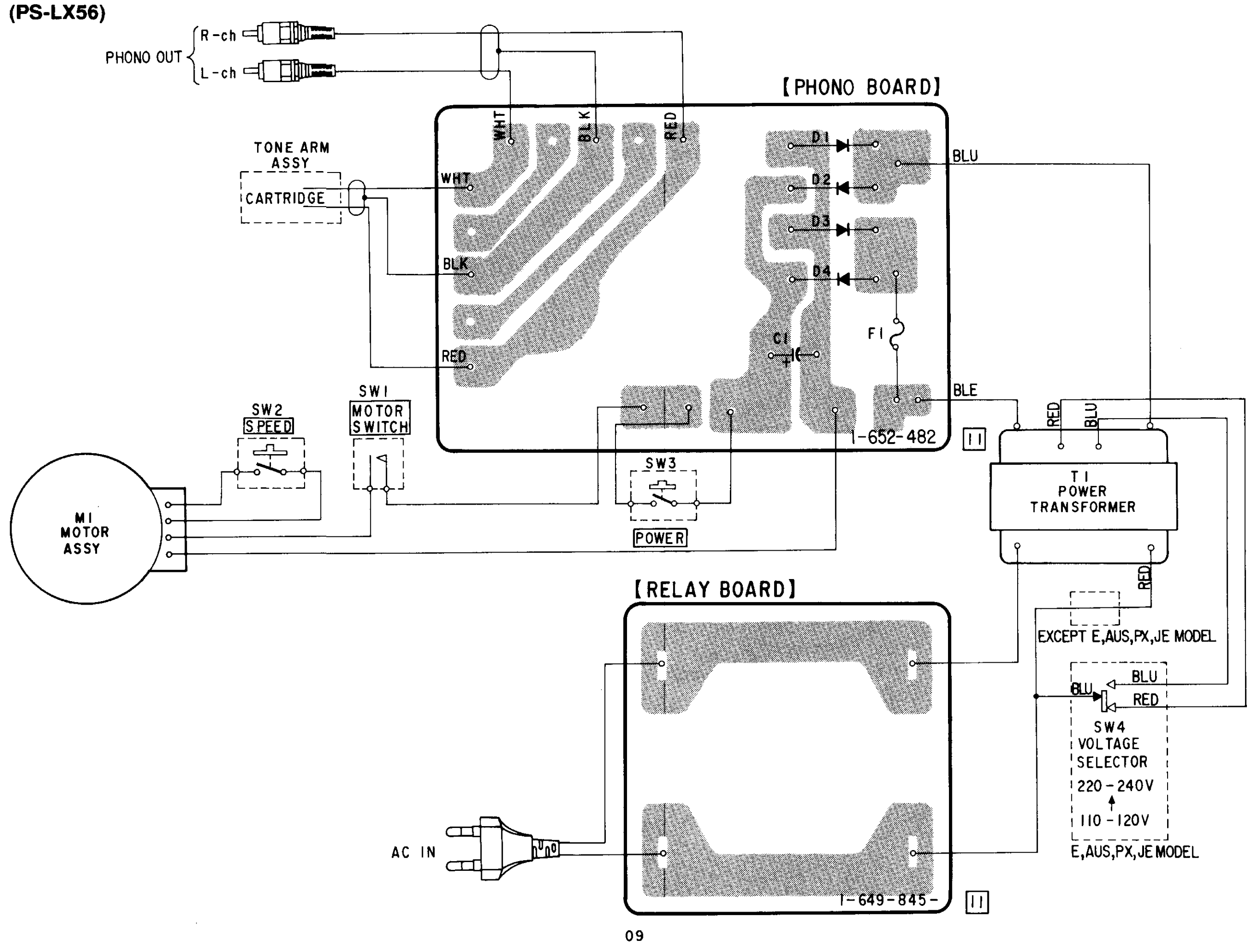
Ref. No.	Switch	Position
SW1	MOTOR	OFF
SW2	SPEED	33
SW3	POWER	OFF
SW4	VOLTAGE SELECTOR	240V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

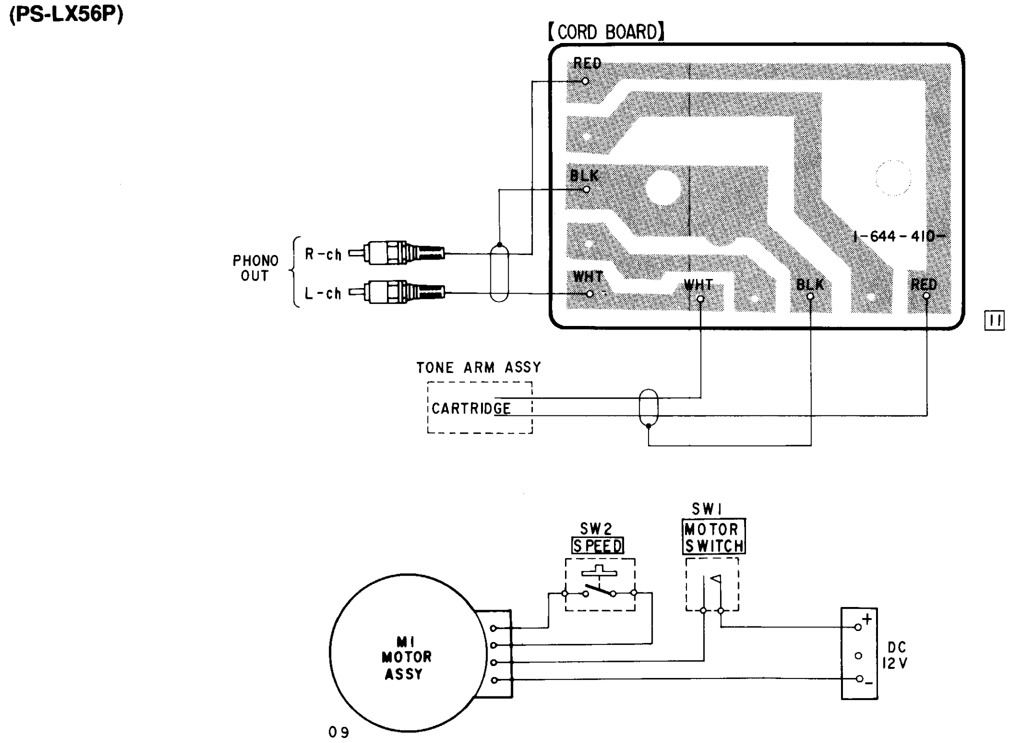
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spéci-fié.

WIRING DIAGRAMS

(PS-LX56)


PHONO OUT
R-ch
L-ch
【PHONO BOARD】
WHT
BLK
RED
TONE ARM ASSY
CARTRIDGE
D1
D2
D3
D4
C1
F1
BLU
BLE
1-652-482
11
SW2 SPEED
SW1 MOTOR SWITCH
SW3
POWER
MI MOTOR ASSY
T1 POWER TRANSFORMER
RED
BLU
【RELAY BOARD】
EXCEPT E,AUS,PX,JE MODEL
SW4 VOLTAGE SELECTOR 220-240V 110-120V
E,AUS,PX,JE MODEL
AC IN
1-649-845-
09

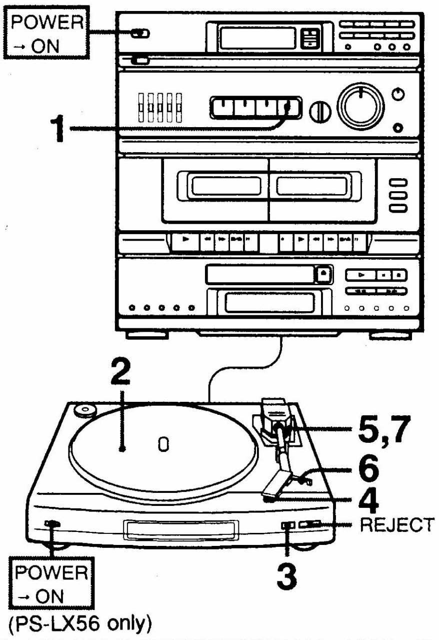
(PS-LX56P)


【CORD BOARD】
RED
BLK
WHT
1-644-410-
11
PHONO OUT
R-ch
L-ch
TONE ARM ASSY
CARTRIDGE
SW2 SPEED
SW1 MOTOR SWITCH
MI MOTOR ASSY
DC 12V
09

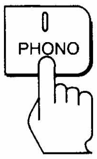
Note:
- ○—— : parts extracted from the component side.

AUS : Australian model
JE : Tourist model

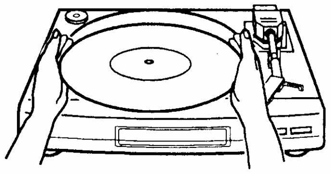
Playing Records


POWER
→ ON
1
2
5,7
6
4
REJECT
3
POWER
→ ON
(PS-LX56 only)

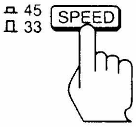
1



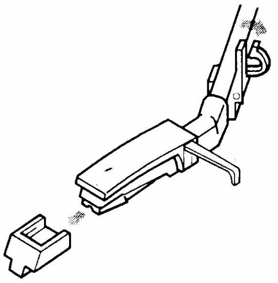
2



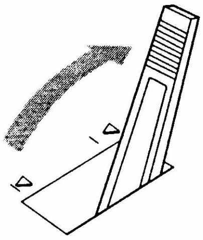
3



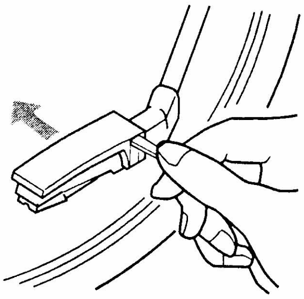
4



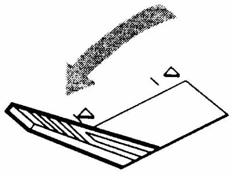
5



6



7



When the record is played to the end, the tonearm returns to the armrest and the turntable stops.

To stop during play, press REJECT.

To play a different part of the record
Lift the tonearm by setting the cueing level to ▼, move the tonearm by hand to the desired point, then set the cueing lever to ▼.

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If the tonearm moves outward when you move it colse to the centre
Do not resist this movement, as it may damage the automatic return mechanism.

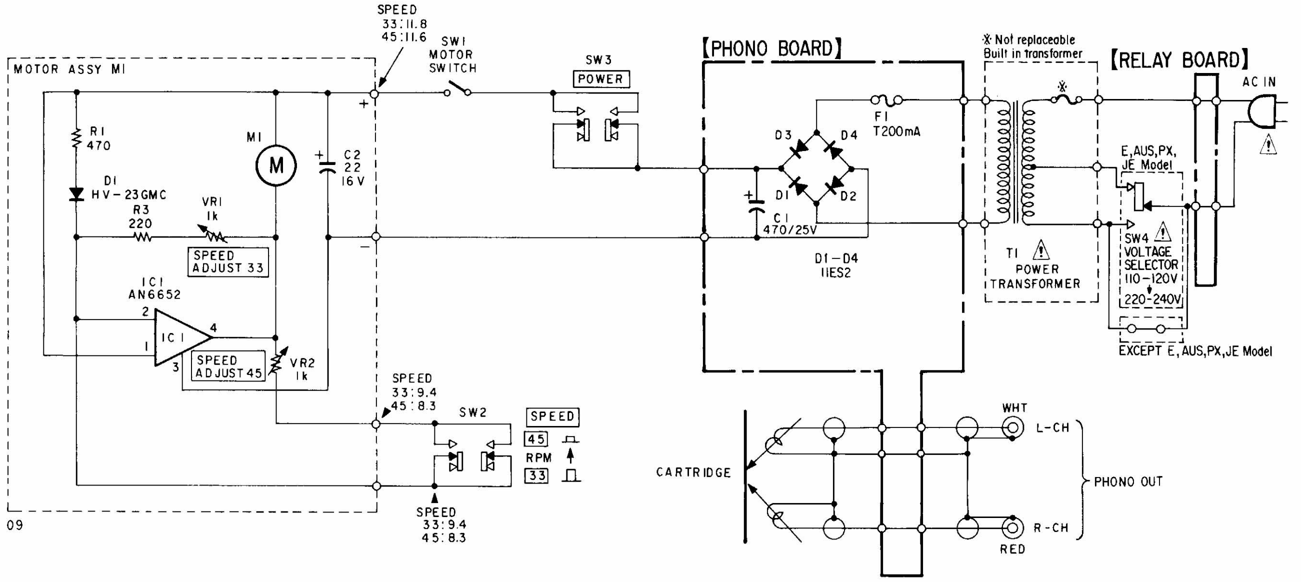
If the tonearm does not return to its armrest
Press REJECT.

SCHEMATIC DIAGRAMS

(PS-LX56)

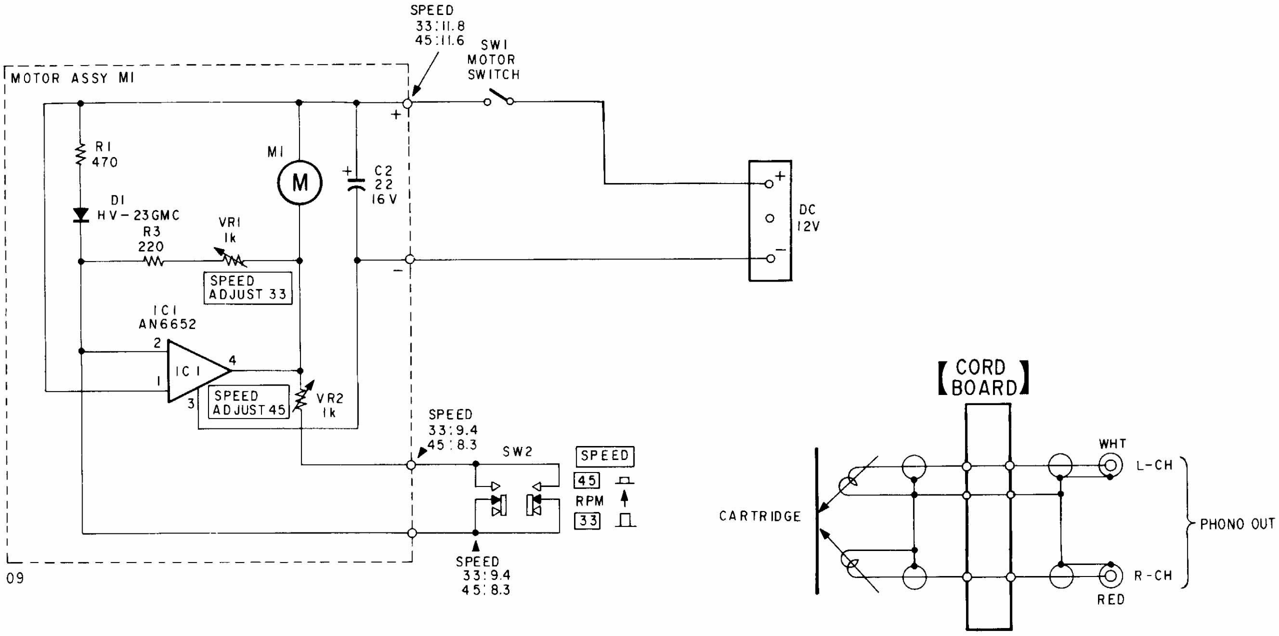
- **Switches :**

Ref. No.	Switch	Position
SW1	MOTOR	OFF
SW2	SPEED	33
SW3	POWER	OFF



MOTOR ASSY M1
R1 470
D1 HV-23GMC
R3 220
VR1 1k
SPEED ADJUST 33
M1
M
C2 22 16V
IC1 AN6652
IC1
SPEED ADJUST 45
VR2 1k
SPEED 33:11.8 45:11.6
SW1 MOTOR SWITCH
SW3 POWER
SPEED 33:9.4 45:8.3
SW2
SPEED
45
RPM
33
SPEED 33:9.4 45:8.3
09
[PHONO BOARD]
D3
D4
D1
D2
F1 T200mA
C1 470/25V
D1-D4 11ES2
※ Not replaceable Built in transformer
T1 POWER TRANSFORMER
[RELAY BOARD]
AC IN
E,AUS,PX, JE Model
SW4 VOLTAGE SELECTOR 110-120V 220-240V
EXCEPT E,AUS,PX,JE Model
CARTRIDGE
WHT
L-CH
PHONO OUT
R-CH
RED

(PS-LX56P)



MOTOR ASSY M1
R1 470
D1 HV-23GMC
R3 220
VR1 1k
SPEED ADJUST 33
M1
M
C2 22 16V
IC1 AN6652
IC1
SPEED ADJUST 45
VR2 1k
SPEED 33:11.8 45:11.6
SW1 MOTOR SWITCH
DC 12V
SPEED 33:9.4 45:8.3
SW2
SPEED
45
RPM
33
SPEED 33:9.4 45:8.3
09
[CORD BOARD]
CARTRIDGE
WHT
L-CH
PHONO OUT
R-CH
RED

Note:
- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

AUS : Australian model
JE : Tourist model

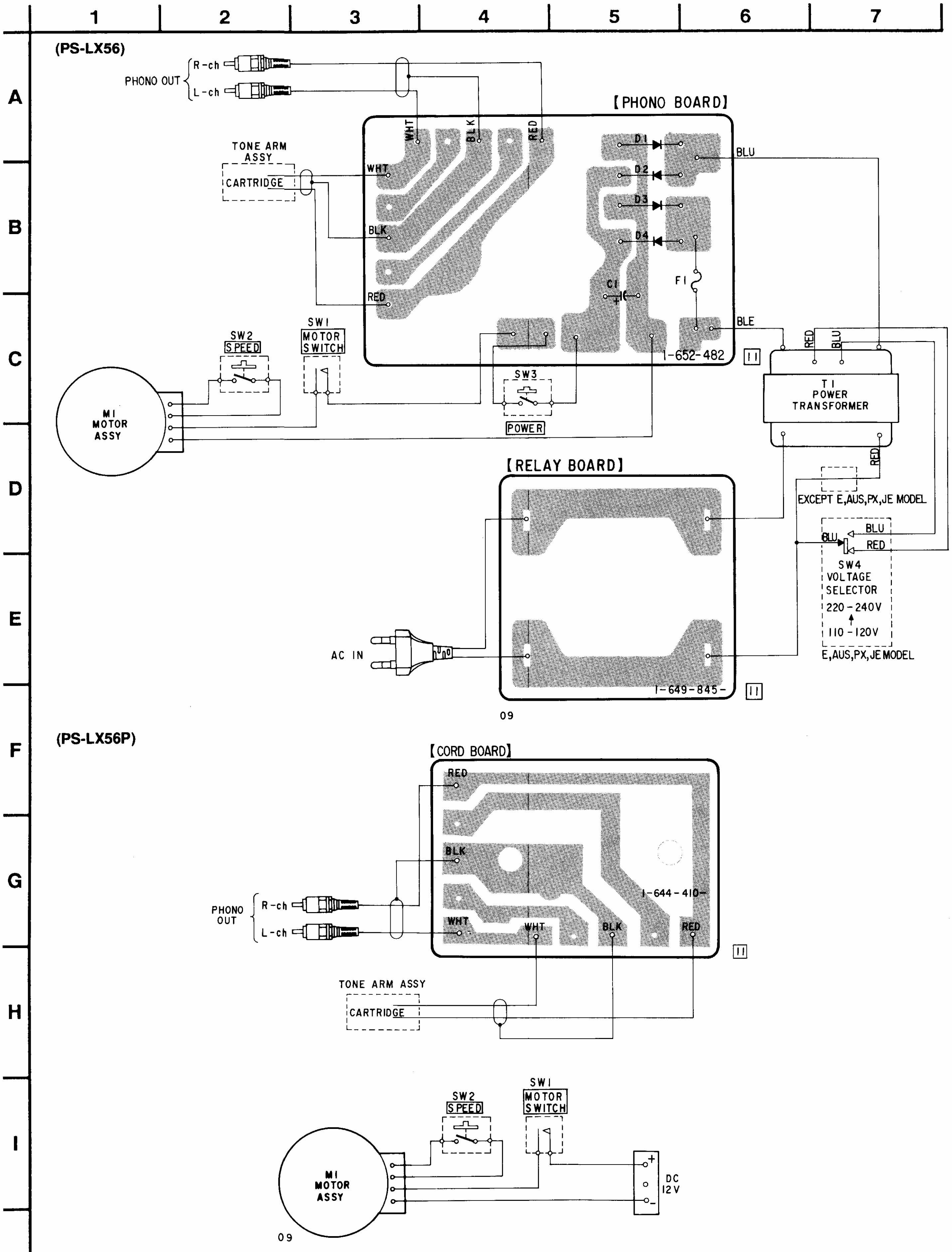
- **Switches :**

Ref. No.	Switch	Position
SW1	MOTOR	OFF
SW2	SPEED	33
SW3	POWER	OFF
SW4	VOLTAGE SELECTOR	240V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spéci-fié.

WIRING DIAGRAMS


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
(PS-LX56)
PHONO OUT
R-ch
L-ch
[PHONO BOARD]
WHT
BLK
RED
TONE ARM ASSY
CARTRIDGE
WHT
BLK
RED
D1
D2
D3
D4
C1
F1
BLU
BLE
1-652-482
11
SW2
SPEED
SW1
MOTOR SWITCH
SW3
POWER
M1
MOTOR
ASSY
RED
BLU
T1
POWER
TRANSFORMER
RED
EXCEPT E,AUS,PX,JE MODEL
BLU
BLU
RED
SW4
VOLTAGE
SELECTOR
220-240V
110-120V
E,AUS,PX,JE MODEL
[RELAY BOARD]
AC IN
1-649-845-
11
09
(PS-LX56P)
[CORD BOARD]
RED
BLK
PHONO OUT
R-ch
L-ch
WHT
WHT
BLK
RED
1-644-410-
11
TONE ARM ASSY
CARTRIDGE
SW2
SPEED
SW1
MOTOR SWITCH
M1
MOTOR
ASSY
09
+
-
DC
12V

Note:
- ○—— : parts extracted from the component side.

AUS : Australian model
JE : Tourist model

EXPLODED VIEW

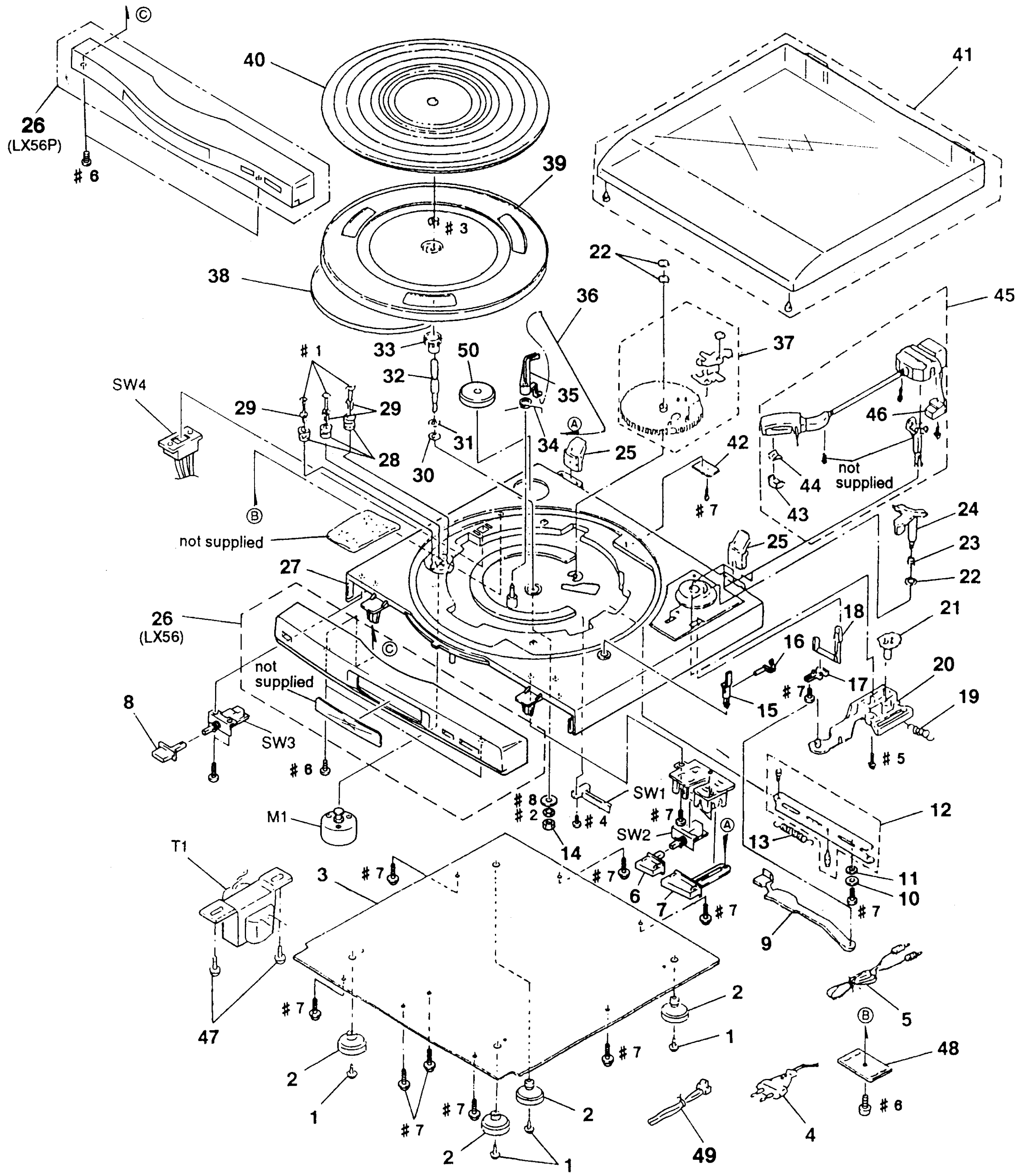
NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " ＊ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

- AUS : Australian model
- CND : Canadian model
- EE : East European model
- IT : Italian model
- MX : Mexican model
- EA : Saudi Arabia model
- SP : Singapore model
- MY : Malaysia model
- JE : Tourist

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.



Ref. No.	Part No.	Description	Remark
1	4-950-497-01	FOOT SEAT	
2	4-950-490-01	PLASTIC STAND	
＊ 3	4-961-804-01	BUTTON BOARD	
⚠4	1-575-651-61	CORD, AC (LX56: AEP, EA, EE, IT, MX, MY, CIS, SP)	
⚠4	1-575-975-11	CORD, AC (LX56: CND, US)	
⚠4	1-590-074-11	CORD, AC (LX56: E)	
⚠4	1-690-608-11	CORD, AC (LX56: AUS)	
⚠4	1-696-570-21	CORD, AC (LX56: UK)	
5	1-555-116-11	CORD, PHONO...(BLACK)	
6	4-964-177-01	KNOB SPEED...(BLACK)	
6	4-964-177-11	KNOB SPEED ...(LX56:SILVER, SILVER METALLIC)	
7	4-964-178-01	KNOB REJECT...(BLACK)	
7	4-964-178-11	KNOB REJECT ...(LX56:SILVER, SILVER METALLIC)	
8	4-964-184-01	KNOB POWER (LX56:BLACK)	
8	4-964-184-11	KNOB POWER ...(LX56:SILVER, SILVER METALLIC)	
9	4-947-487-01	RETURN LINK	
10	4-890-173-00	WASHER	
11	3-659-350-00	WASHER	
12	A-4604-947-A	RETURN ASSY, LEVER	
13	4-947-485-01	SPRING (22)	
14	4-947-510-01	NUT	
15	4-947-491-01	ARM REST	
16	A-4660-499-A	ARM CLIP ASSY	
17	4-947-477-01	CUEING (BASE)	
18	4-947-468-01	LEVER, CUEING	
19	4-963-537-01	SPRING	
20	4-963-536-01	LINK RETURN	
21	4-963-535-01	ADJUST CAM	
22	4-947-514-01	4MM CS RING	
23	4-947-467-01	SPRING (6)	
24	4-947-466-01	TONE ARM ELEVATOR	
25	A-4660-498-A	HINGE ASSY	
26	A-4384-982-A	PANEL (B) ASSY, FRONT (LX56: SILVER)	
26	A-4411-941-A	PANEL (B) ASSY, FRONT (LX56: SILVER METALLIC)	
26	A-4660-577-A	FRONT PANEL (G) ASSY (LX56: GRAY) (US)	
26	A-4660-578-A	FRONT PANEL (G) ASSY (LX56: BLACK)	
26	A-4660-976-A	FRONT PANEL (G) ASSY (LX56P)	
＊ 27	4-950-487-01	MAIN CABINET (B)...(BLACK)	
＊ 27	4-950-487-11	MAIN CABINET (B) ...(LX56:SILVER, SILVER METALLIC)	
28	4-947-505-01	CUSHION MOTOR	
29	4-947-504-01	COLLAR	
30	3-451-162-00	WASHER (56)	
31	3-701-445-21	WASHER	
32	4-947-498-01	STELL BALL	
33	4-947-497-01	GEAR	
34	4-947-496-01	SPRING (34)	
35	4-947-495-01	WIPER REJECT	
36	4-948-101-01	SPRING (38)	
37	A-4604-916-A	GEAR ASSY, SPUR	
38	4-947-503-01	BELT	
39	4-947-494-01	TURNTABLE PLATTER	
40	4-947-539-01	RUBBER MAT	
41	A-4604-946-A	DUST COVER ASSY	
＊ 42	1-652-482-11	PHONO BOARD (LX56)	
＊ 42	1-644-410-11	CORD BOARD (LX56P)	
43	4-948-095-01	COVER, CARTRIDGE	
44	4-951-290-01	STYLUS (CN-234)	
45	A-4604-940-A	ARM ASSY, TONE	
46	4-947-464-01	COUNTER WEIGHT	
47	4-952-961-01	SCREW (LX56)	
＊ 48	1-649-845-11	RELAY BOARD (LX56)	
49	1-557-109-21	CORD, DC (LX56P)	
50	3-701-806-00	ADAPTOR, 45	
M1	A-4604-945-A	MOTOR ASSY	
SW1	1-570-666-11	SWITCH (LEAF)	
SW2	1-571-089-11	SWITCH, PUSH (SPEED) (1 KEY)	
SW3	1-692-211-11	SWITCH, PUSH (POWER) (1 KEY) (LX56)	
⚠SW4	1-692-835-11	VOLTAGE SELECTOR (LX-56: AUS, E, MX, MY, SP)	
⚠T1	1-450-987-11	TRANSFORMER, POWER (LX56: AEP, EE, IT, CIS)	
⚠T1	1-450-987-21	TRANSFORMER, POWER (LX56: AUS, E, PX, EA, JE, MX, SP)	
⚠T1	1-450-987-31	TRANSFORMER, POWER (LX56: MY)	
⚠T1	1-450-987-41	TRANSFORMER, POWER (LX56: U, CA)	

CORD **PHONO** **RELAY**

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Items marked "＊" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Hardware (# mark) list is given in the last of this parts list.

- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- AUS : Australian model
- CND : Canadian model
- EE : East European model
- IT : Italian model
- MX : Mexican model
- EA : Saudi Arabia model
- SP : Singapore model
- MY : Malaysia model
- JE : Tourist

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
＊	1-644-410-11	CORD BOARD (LX56P) ＊＊＊＊＊＊＊＊＊＊	
＊＊＊			
＊	1-652-482-11	PHONO BOARD (LX56) ＊＊＊＊＊＊＊＊＊＊＊	
		< CAPACITOR >	
C1	1-126-012-11	ELECT 470uF 16V	
		< DIODE >	
D1	8-719-200-82	DIODE 11ES2	
D2	8-719-200-82	DIODE 11ES2	
D3	8-719-200-82	DIODE 11ES2	
D4	8-719-200-82	DIODE 11ES2	
		< FUSE >	
⚠F1	1-532-613-XX	FUSE TIME-LAG (T200mA)	
＊＊＊			
＊	1-649-845-11	RELAY BOARD (LX56) ＊＊＊＊＊＊＊＊＊＊＊	
＊＊＊			
		ACCESSORIES & PACKING MATERIALS ＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊	
	3-758-045-11	MANUAL INSTRUCTION (English, French, Spanish, Portuguese) (LX56 AEP, CND)	
	3-758-045-21	MANUAL INSTRUCTION (English) (LX56 US, UK)	
	3-758-045-41	MANUAL INSTRUCTION (German, Dutch, Swedish, Italian) (LX56 AEP, IT)	
	3-758-045-51	MANUAL INSTRUCTION (English, French, Spanish, Chinese) (LX56 AUS, E, PX, MX, EA, MY, SP, JE)	
	3-758-045-61	MANUAL INSTRUCTION (English, German, Polish) (LX56 EE, CIS)	
＊	4-947-532-01	SNOW BOX (L)	
＊	4-947-533-01	SNOW BOX (R)	
	3-701-806-00	ADAPTOR, 45	
＊＊＊			
		＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊ HARDWARE LIST ＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊	
#1	7-621-773-87	SCREW (64)	
#2	7-623-210-22	WASHER (57)	
#3	7-624-110-04	6MM E RING	
#4	7-685-105-01	SCREW (59)	
#5	7-685-645-79	SCREW (68)	
#6	7-685-646-79	SCREW (60)	
#7	7-685-647-79	SCREW (58)	
#8	7-688-005-01	WASHER (69)	

EXPLODED VIEW

NOTE:

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- The mechanical parts with no reference number in the exploded views are not supplied.

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- EE : East European model
- IT : Italian model
- MX : Mexican model
- EA : Saudi Arabia model
- SP : Singapore model
- MY : Malaysia model
- JE : Tourist

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

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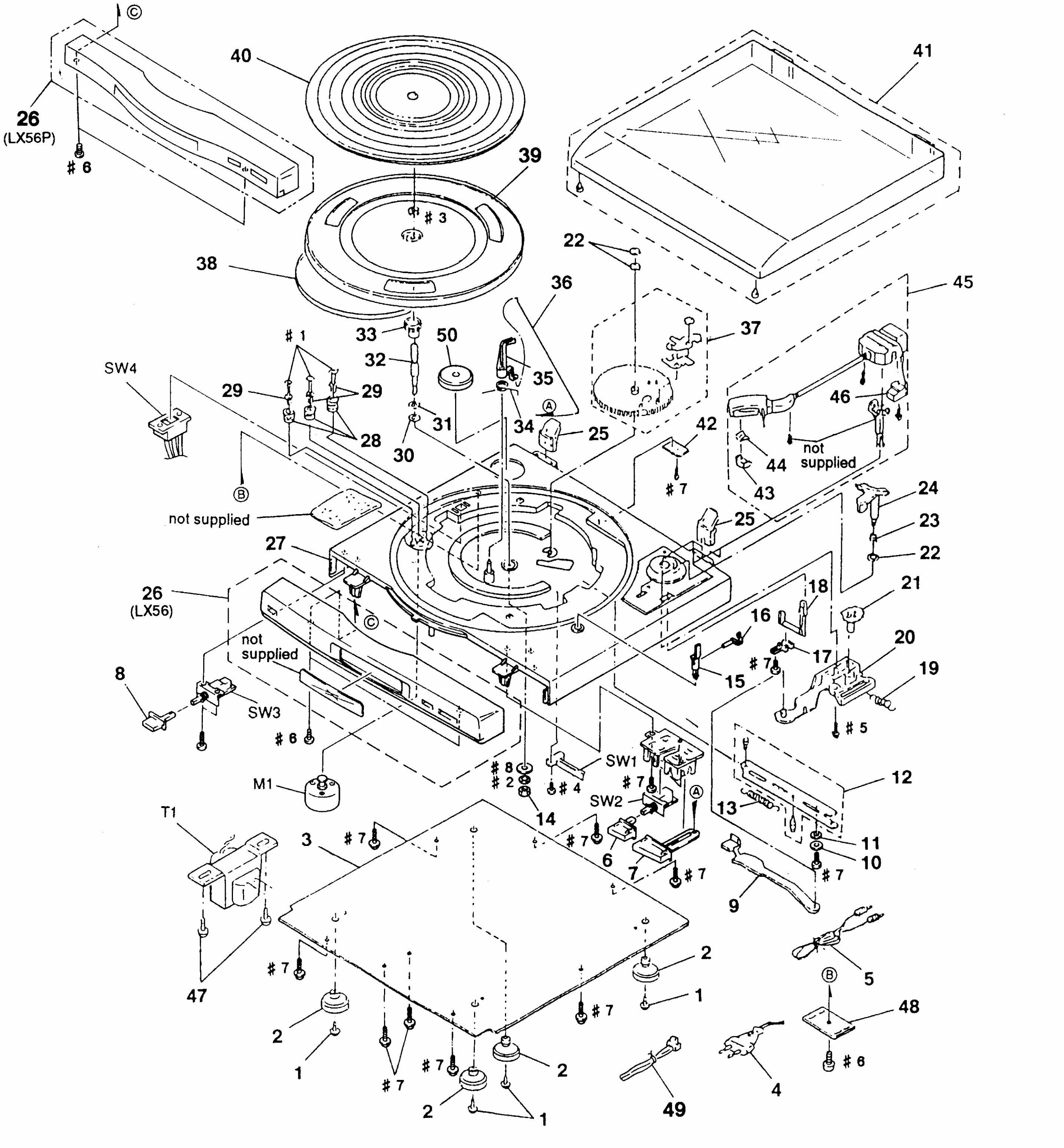
Ne les remplacer que par une piéce portant le numéro spécifié.


©
40
41
26
(LX56P)
# 6
39
# 3
38
22
36
45
33
50
37
# 1
SW4
29
29
32
35
46
31
34
Ⓐ
25
42
28
30
44
not supplied
Ⓑ
# 7
43
not supplied
24
25
23
27
22
21
26
(LX56)
18
16
20
not supplied
Ⓒ
8
17
# 7
19
15
SW3
# 5
# 6
SW1
# 8
# 2
# 4
12
# 7
M1
SW2
Ⓐ
14
13
11
T1
3
# 7
# 7
6
10
7
# 7
# 7
9
2
47
# 7
Ⓑ
5
1
# 7
48
2
1
# 7
2
4
# 6
# 7
2
1
49

Ref. No.	Part No.	Description	Remark
1	4-950-497-01	FOOT SEAT	
2	4-950-490-01	PLASTIC STAND	
* 3	4-961-804-01	BUTTON BOARD	
⚠4	1-575-651-61	CORD, AC (LX56: AEP, EA, EE, IT, MX, MY, CIS, SP)	
⚠4	1-575-975-11	CORD, AC (LX56: CND, US)	
⚠4	1-590-074-11	CORD, AC (LX56: E)	
⚠4	1-690-608-11	CORD, AC (LX56: AUS)	
⚠4	1-696-570-21	CORD, AC (LX56: UK)	
5	1-555-116-11	CORD, PHONO...(BLACK)	
6	4-964-177-01	KNOB SPEED...(BLACK)	
6	4-964-177-11	KNOB SPEED ...(LX56:SILVER, SILVER METALLIC)	
7	4-964-178-01	KNOB REJECT...(BLACK)	
7	4-964-178-11	KNOB REJECT ...(LX56:SILVER, SILVER METALLIC)	
8	4-964-184-01	KNOB POWER (LX56:BLACK)	
8	4-964-184-11	KNOB POWER ...(LX56:SILVER, SILVER METALLIC)	
9	4-947-487-01	RETURN LINK	
10	4-890-173-00	WASHER	
11	3-659-350-00	WASHER	
12	A-4604-947-A	RETURN ASSY, LEVER	
13	4-947-485-01	SPRING (22)	
14	4-947-510-01	NUT	
15	4-947-491-01	ARM REST	
16	A-4660-499-A	ARM CLIP ASSY	
17	4-947-477-01	CUEING (BASE)	
18	4-947-468-01	LEVER, CUEING	
19	4-963-537-01	SPRING	
20	4-963-536-01	LINK RETURN	
21	4-963-535-01	ADJUST CAM	
22	4-947-514-01	4MM CS RING	
23	4-947-467-01	SPRING (6)	
24	4-947-466-01	TONE ARM ELEVATOR	
25	A-4660-498-A	HINGE ASSY	
26	A-4384-982-A	PANEL (B) ASSY, FRONT (LX56: SILVER)	
26	A-4411-941-A	PANEL (B) ASSY, FRONT (LX56: SILVER METALLIC)	
26	A-4660-577-A	FRONT PANEL (G) ASSY (LX56: GRAY) (US)	
26	A-4660-578-A	FRONT PANEL (G) ASSY (LX56: BLACK)	
26	A-4660-976-A	FRONT PANEL (G) ASSY (LX56P)	
* 27	4-950-487-01	MAIN CABINET (B)...(BLACK)	
* 27	4-950-487-11	MAIN CABINET (B) ...(LX56:SILVER, SILVER METALLIC)	
28	4-947-505-01	CUSHION MOTOR	
29	4-947-504-01	COLLAR	
30	3-451-162-00	WASHER (56)	
31	3-701-445-21	WASHER	
32	4-947-498-01	STELL BALL	
33	4-947-497-01	GEAR	
34	4-947-496-01	SPRING (34)	
35	4-947-495-01	WIPER REJECT	
36	4-948-101-01	SPRING (38)	
37	A-4604-916-A	GEAR ASSY, SPUR	
38	4-947-503-01	BELT	
39	4-947-494-01	TURNTABLE PLATTER	
40	4-947-539-01	RUBBER MAT	
41	A-4604-946-A	DUST COVER ASSY	
* 42	1-652-482-11	PHONO BOARD (LX56)	
* 42	1-644-410-11	CORD BOARD (LX56P)	
43	4-948-095-01	COVER, CARTRIDGE	
44	4-951-290-01	STYLUS (CN-234)	
45	A-4604-940-A	ARM ASSY, TONE	
46	4-947-464-01	COUNTER WEIGHT	
47	4-952-961-01	SCREW (LX56)	
* 48	1-649-845-11	RELAY BOARD (LX56)	
49	1-557-109-21	CORD, DC (LX56P)	
50	3-701-806-00	ADAPTOR, 45	
M1	A-4604-945-A	MOTOR ASSY	
SW1	1-570-666-11	SWITCH (LEAF)	
SW2	1-571-089-11	SWITCH, PUSH (SPEED) (1 KEY)	
SW3	1-692-211-11	SWITCH, PUSH (POWER) (1 KEY) (LX56)	
⚠SW4	1-692-835-11	VOLTAGE SELECTOR (LX-56: AUS, E, MX, MY, SP)	
⚠T1	1-450-987-11	TRANSFORMER, POWER (LX56: AEP, EE, IT, CIS)	
⚠T1	1-450-987-21	TRANSFORMER, POWER (LX56: AUS, E, PX, EA, JE, MX, SP)	
⚠T1	1-450-987-31	TRANSFORMER, POWER (LX56: MY)	
⚠T1	1-450-987-41	TRANSFORMER, POWER (LX56: U, CA)	

CORD **PHONO** **RELAY**

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Hardware (# mark) list is given in the last of this parts list.
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- AUS : Australian model
- CND : Canadian model
- EE : East European model
- IT : Italian model
- MX : Mexican model
- EA : Saudi Arabia model
- SP : Singapore model
- MY : Malaysia model
- JE : Tourist

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Replace only with part number specified.

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Ref.No.	Part No.	Description		Remark
*	1-644-410-11	CORD BOARD (LX56P) **********		

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Ref.No.	Part No.	Description		Remark
*	1-652-482-11	PHONO BOARD (LX56) ***********		
		< CAPACITOR >		
C1	1-126-012-11	ELECT	470uF	16V
		< DIODE >		
D1	8-719-200-82	DIODE	11ES2	
D2	8-719-200-82	DIODE	11ES2	
D3	8-719-200-82	DIODE	11ES2	
D4	8-719-200-82	DIODE	11ES2	
		< FUSE >		
⚠F1	1-532-613-XX	FUSE TIME-LAG (T200mA)		

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Ref.No.	Part No.	Description		Remark
*	1-649-845-11	RELAY BOARD (LX56) ***********		

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Ref.No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS ******************************	
	3-758-045-11	MANUAL INSTRUCTION (English, French, Spanish, Portuguese) (LX56 AEP, CND)	
	3-758-045-21	MANUAL INSTRUCTION (English) (LX56 US, UK)	
	3-758-045-41	MANUAL INSTRUCTION (German, Dutch, Swedish, Italian) (LX56 AEP, IT)	
	3-758-045-51	MANUAL INSTRUCTION (English, French, Spanish, Chinese) (LX56 AUS, E, PX, MX, EA, MY, SP, JE)	
	3-758-045-61	MANUAL INSTRUCTION (English, German, Polish) (LX56 EE, CIS)	
*	4-947-532-01	SNOW BOX (L)	
*	4-947-533-01	SNOW BOX (R)	
	3-701-806-00	ADAPTOR, 45	

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HARDWARE LIST

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Ref.No.	Part No.	Description
#1	7-621-773-87	SCREW (64)
#2	7-623-210-22	WASHER (57)
#3	7-624-110-04	6MM E RING
#4	7-685-105-01	SCREW (59)
#5	7-685-645-79	SCREW (68)
#6	7-685-646-79	SCREW (60)
#7	7-685-647-79	SCREW (58)
#8	7-688-005-01	WASHER (69)

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.1	2001.07	PDF registration (including : 9-959-216-81, 9-959-216-82, 9-959-216-83, 9-959-216-91)
1.0	1993.11	New